ARCH - ARCHITECTURE

ARCH Class Schedule (https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/ARCH/)

Courses

ARCH 101  Introduction to Architecture  credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/101/)
An introduction to architecture, architectural education and the profession with emphasis on issues that influence architecture and the people and processes involved.

ARCH 164  Architecture as a Second Language  credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/164/)
The conceptual toolbox used by architects, and the tools in it, are unique and used by architects in both expected and unexpected situations. These tools can be thought of as a second language. Architecture as a Second Language is a hands-on, experiential online course that immerses students in challenging activities similar to those architects face. The course helps develop new perspectives, capabilities, and insights that can be applied to any calling or discipline.
This course satisfies the General Education Criteria for: Humanities - Lit Arts

ARCH 171  Concepts and Theories of Architectural Design  credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/171/)
This course introduces basic theories of architecture. It creates awareness of design concepts. Course content is arranged in three topical areas: Architecture and People, Architecture and Place, and Making Architecture. Each topical area addresses roles of designers and architects in contemporary and historical perspectives.

ARCH 172  Drawing and Modeling  credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/172/)
Introduction to the architectural graphic communication skills that architects use to visualize, analyze, and record creative thoughts: freehand sketching, architectural delineation, and digital applications.

ARCH 199  Undergraduate Open Seminar  credit: 1 to 5 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/199/)
May be repeated.

ARCH 210  Introduction to the History of World Architecture  credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/210/)
An introduction to the history of World Architecture, Urbanism, and the built environment from pre-history to the present; in addition to examining the formal properties of global architecture, this course explores buildings and cities in their cultural, social, political, and religious contexts. Prerequisite: Sophomore standing or consent of instructor.

ARCH 222  Islamic Gardens & Architecture  credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/222/)
Same as ARTH 219 and LA 222. See LA 222.
This course satisfies the General Education Criteria for: Humanities - Hist Phil
Cultural Studies - Non-West

ARCH 231  Anatomy of Buildings  credit: 4 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/231/)
A holistic approach to the introduction of architectural technology. Enabling students to integrate technical material with design, this lecture/lab course addresses building codes, zoning, construction documentation and delivery, digital fabrication, and the impact of energy, sustainability, and environmental forces on building construction, comparing general principles of light frame and heavy construction materials, components, and systems. Students learn how to build virtually and physically, understanding the roles design and construction professionals play on integrated teams.

ARCH 232  Structural Fundamentals  credit: 4 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/232/)
The study of forces, their distribution, and their impact on building structure. Topics include: equilibrium of rigid bodies in two and three dimensions; trusses; shear and bending moments in beams; arches and frames; stresses, strains, and deformations in axially loaded members; direct shear and bearing stresses; torsion; beam stresses and deflections; introduction to the design of structural members; and architectural applications. Prerequisite: MATH 220 or MATH 221, and MATH 231 or PHYS 101.

ARCH 273  Strategies of Architectural Design  credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/273/)
Focuses on understanding architecture as holistic synthesis of principles, technology and form. Content is arranged in six areas: Research and Analysis, Typology Analysis, Street Analysis, Block Analysis, Neighborhood Analysis, and Development and Presentation. Students work both on individual assignments and in teams on design projects. Emphasis on combining graphic and modeling skills with analytical skills. Exercises require demonstration of skills and concepts introduced in earlier design and technology courses. Same as UP 273.

ARCH 274  Representation  credit: 3 or 4 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/274/)
Develops understanding of the representation of ideas, values, and meaning in the built environment. Focuses on three topical areas: analysis, technical communication, and modeling. Exposure to multiple software tools and mastery of basic skills in each.

ARCH 314  History of World Landscapes  credit: 4 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/314/)
Same as LA 314. See LA 314.
This course satisfies the General Education Criteria for: Advanced Composition Humanities - Hist Phil
Cultural Studies - Western

ARCH 315  History of Modern Landscape Architecture  credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/315/)
Same as LA 315. See LA 315.
ARCH 321 Environment, Architecture, and Global Health  credit: 3 Hours. ([https://courses.illinois.edu/schedule/terms/ARCH/321/](https://courses.illinois.edu/schedule/terms/ARCH/321/))

This course surveys current research at the intersection of the built environment, health, and well-being. It emphasizes relationships among people and multiple scales of the environments they inhabit and the health and well-being consequences of these relationships. It comparatively examines these relationships within a broad range of Western and Non-Western cultures and contexts by introducing significant historical and contemporary theories, data of relevance, research processes, and applications in environmental design and planning processes. To improve person-environment fit, the roles of social groups, institutions, and organizations in the person-environment-health/well-being nexus within various cultural and geographic contexts are examined and compared.

ARCH 371 Architectural Design and Urbanism  credit: 6 Hours. ([https://courses.illinois.edu/schedule/terms/ARCH/371/](https://courses.illinois.edu/schedule/terms/ARCH/371/))

Building design in urban settings; including introductory urban design and site planning issues; urban zoning requirements; human-built environment relationships; life safety requirements; universal design and accessibility; architectural design methods and presentation techniques; required field trips. Prerequisite: ARCH 171, ARCH 172, ARCH 273, ARCH 274, or Consent of Instructor.

ARCH 372 Designing for Human Well-being  credit: 6 Hours. ([https://courses.illinois.edu/schedule/terms/ARCH/372/](https://courses.illinois.edu/schedule/terms/ARCH/372/))

This course focuses on person-environment relationships to improve the well-being outcomes of design. Students explore nested environmental scales, human and built context, natural environment systems, cultural perspectives, multi-sensory perception, and widely accessible, enabling and inclusive environments. This course introduces design projects as discrete places, both within and influenced by broader physical, social, cultural, and economic systems. This class requires field trips. Prerequisite: ARCH 171, 172, 273, 274, 321, 371 or consent of Instructor. Course restricted to BSAS majors with junior standing or above.

ARCH 401 Independent Study  credit: 0 to 4 Hours. ([https://courses.illinois.edu/schedule/terms/ARCH/401/](https://courses.illinois.edu/schedule/terms/ARCH/401/))

Independent guided study and investigation in a selected area of architecture. 0 to 4 undergraduate hours. 0 to 4 graduate hours. Approved for both letter and S/U grading. May be repeated. Prerequisite: Junior standing in architecture, written proposal approved by a sponsoring faculty member and the approval of the Director of the School.

ARCH 402 Introduction to the History of Architectural Theory  credit: 3 Hours. ([https://courses.illinois.edu/schedule/terms/ARCH/402/](https://courses.illinois.edu/schedule/terms/ARCH/402/))

Architectural theory, criticism, and historiography from antiquity to the present. Based on close readings of texts from antiquity to the present day. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 210 or consent of instructor.

ARCH 403 Special Topics in Architectural History  credit: 3 Hours. ([https://courses.illinois.edu/schedule/terms/ARCH/403/](https://courses.illinois.edu/schedule/terms/ARCH/403/))

Special topics in Architectural History courses. Topics and subject matter to be published in course listings. 3 undergraduate hours. 3 graduate hours. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: ARCH 210 or consent of instructor.

ARCH 407 Rome: City of Visible History  credit: 3 Hours. ([https://courses.illinois.edu/schedule/terms/ARCH/407/](https://courses.illinois.edu/schedule/terms/ARCH/407/))

While primarily associated in popular imagination with its ancient, medieval, and Renaissance past, Rome is a vital, changing, and challenging contemporary city. Rome’s many layers show the intersection of multiple periods of architecture and the effects of politics, economics, religion, and culture on the urban context. This course considers the city of Rome from its foundation until today, using critical strategies for understanding urban environments as well as individual monuments. We will employ a variety of evidentiary materials: individual monuments, maps, photographs, prints, primary texts, and films. 3 undergraduate hours. 3 graduate hours. Prerequisite: Sophomore standing.

ARCH 409 Studies in Spanish Architecture  credit: 3 Hours. ([https://courses.illinois.edu/schedule/terms/ARCH/409/](https://courses.illinois.edu/schedule/terms/ARCH/409/))

Explores aspects of the architecture and urban design of Spain from antiquity until the present. 3 undergraduate hours. 3 graduate hours. May be repeated to a maximum of 6 hours. Prerequisite: ARCH 210.

ARCH 410 Ancient Egyptian & Greek Arch  credit: 3 Hours. ([https://courses.illinois.edu/schedule/terms/ARCH/410/](https://courses.illinois.edu/schedule/terms/ARCH/410/))

Architecture and urban form in Egypt and the Greek world through the Hellenistic period. Same as CLCV 410. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 210, ARTH 111 or CLCV 131.

ARCH 411 Ancient Roman Architecture  credit: 3 Hours. ([https://courses.illinois.edu/schedule/terms/ARCH/411/](https://courses.illinois.edu/schedule/terms/ARCH/411/))

Architecture and urban form in the ancient Roman world from the Etruscans to Late Antiquity. Same as CLCV 411. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 210; ARTH 111, CLCV 131, or CLCV 132.

ARCH 412 Medieval Architecture  credit: 3 Hours. ([https://courses.illinois.edu/schedule/terms/ARCH/412/](https://courses.illinois.edu/schedule/terms/ARCH/412/))

This course introduces the architecture, monumental arts, and urbanism of Byzantium and medieval western Europe from c. 300-1500, using a comparative approach. We will learn about Byzantium’s domed churches and robust cities, Europe’s Romanesque monasteries and pilgrimage destinations, and its soaring Gothic cathedrals, fortresses, and cities. It integrates architecture with the study of the roles of secular and ecclesiastical authority, design and technological developments, religious performance and observance, warfare and trade between regions, and developing urbanism. Same as MDVL 412. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 210 or ARTH 111.

ARCH 414 Baroque & Rococo Arch  credit: 3 Hours. ([https://courses.illinois.edu/schedule/terms/ARCH/414/](https://courses.illinois.edu/schedule/terms/ARCH/414/))

Developments in architecture, urban design, and garden art in Italy, France, Germany, and England in the seventeenth and eighteenth centuries. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 210, ARTH 112, or consent of instructor.

ARCH 415 Modernity's Mirror: Nineteenth-Century Architecture 1750-1900  credit: 3 Hours. ([https://courses.illinois.edu/schedule/terms/ARCH/415/](https://courses.illinois.edu/schedule/terms/ARCH/415/))

The course examines architecture and urbanism in the long nineteenth century (c.1750-1900), focusing on Europe and North America. Significant attention will be paid to architectural responses to rapid technological and social changes, including industrialization and the rise of consumer culture, nationalism and colonialism, migration and urbanization, and changes to class and gender norms. We will also consider ancient and medieval architectural revivalism as anchors for political, social, and cultural meaning in the modern world. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 210 or ARTH 112, or consent of instructor.
ARCH 416  The Architecture of the United States, c.1650 to Present credit: 3 Hours. ([https://courses.illinois.edu/schedule/terms/ARCH/416/](https://courses.illinois.edu/schedule/terms/ARCH/416/))

This course surveys the architecture and urbanism in the territory of the present-day United States from c.1650 CE forward. Topics include Native American urban centers; the diverse national origins of colonial architecture; the ongoing significance of vernacular forms; the search for an architecture of democracy; the architecture of slavery; industrialization and the built environment; the Great Migration, urbanization, and architecture; the rise of a formal architectural profession; Modernist architectures in the U.S.; architecture, real estate, and the forces of capital investment; new technologies and the built environment. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 210, ARTH 112, or consent of instructor.

ARCH 417  Modern and Contemporary Global Architecture credit: 3 Hours. ([https://courses.illinois.edu/schedule/terms/ARCH/417/](https://courses.illinois.edu/schedule/terms/ARCH/417/))

This course surveys the comparative history of world architecture and urbanism from c.1900 to the present, including Modernist, postmodernist and contemporary architectures. Themes include the rise of new typologies, materials and techniques; the centrality of utopian thought, both built and imagined; architecture’s role in forging emerging national and postcolonial identities; architecture as visual communication; the rise of spectacle and the privatization of public space; adaptive reuse and emerging discourses of sustainability. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 210 or ARTH 112, or consent of instructor.

ARCH 418  History of the Urban Environment credit: 3 Hours. ([https://courses.illinois.edu/schedule/terms/ARCH/418/](https://courses.illinois.edu/schedule/terms/ARCH/418/))

Examines the evolution of town planning and urban design from prehistory to the present; studies cultural and technical advancements affecting the form of the urban environment. 3 undergraduate hours. 3 graduate hours. Prerequisite: ARCH 210 or consent of instructor.

ARCH 419  Historic Building Preservation credit: 3 Hours. ([https://courses.illinois.edu/schedule/terms/ARCH/419/](https://courses.illinois.edu/schedule/terms/ARCH/419/))

Introduces historic preservation: legal, financial, and administrative assistance, graphic examination of restored buildings and sites, and application of conservation technology. 3 undergraduate hours. 3 graduate hours.

ARCH 423  Soc/Beh Factors for Design credit: 3 Hours. ([https://courses.illinois.edu/schedule/terms/ARCH/423/](https://courses.illinois.edu/schedule/terms/ARCH/423/))

Research-oriented introduction to existing social and behavioral knowledge, methods, and tools for relating man to his physical and social environment, with implications for theories and a philosophy of architectural design. 3 undergraduate hours. 3 graduate hours. Prerequisite: Consent of instructor.

ARCH 424  Gender & Race in Contemp Arch credit: 3 Hours. ([https://courses.illinois.edu/schedule/terms/ARCH/424/](https://courses.illinois.edu/schedule/terms/ARCH/424/))

Analyzes how the built environment reflects social attitudes towards gender and race. Identifies the work of women and people of color in architecture and related disciplines as consumers, critics, and creators of the environment. Provides links with valuable professional networks in Chicago and elsewhere. Same as GWS 424. 3 undergraduate hours. 3 graduate hours. Prerequisite: Consent of instructor.

ARCH 433  Design of Steel and Reinforced Concrete Structures I credit: 4 Hours. ([https://courses.illinois.edu/schedule/terms/ARCH/433/](https://courses.illinois.edu/schedule/terms/ARCH/433/))

Loads and load combinations; design methods/structural safety; steel as a structural material; design of structural steel members subject to tension, compression, bending, and shear. Reinforced concrete as a structural material; design for bending, shear, and serviceability; introduction to design of columns. 4 undergraduate hours. 4 graduate hours. Prerequisite: ARCH 232. Restricted to undergraduate and graduate students in the School of Architecture.

ARCH 434  Environmental Control Systems I credit: 5 Hours. ([https://courses.illinois.edu/schedule/terms/ARCH/434/](https://courses.illinois.edu/schedule/terms/ARCH/434/))

Study of the control of thermal, luminous, and sonic environments with an emphasis on passive means of controls. Specific topics include: thermal comfort and behavioral implications; fundamentals of thermal behavior of buildings; the principles of heat and moisture in buildings; lighting fundamentals; light sources; effects of lighting on comfort and performance; energy economy and sustainability; acoustic fundamentals; room acoustics; noise control; basic electrical, plumbing, vertical transportation, and life safety systems. 5 undergraduate hours. 5 graduate hours.

ARCH 435  Structural Systems and Construction Methods credit: 4 Hours. ([https://courses.illinois.edu/schedule/terms/ARCH/435/](https://courses.illinois.edu/schedule/terms/ARCH/435/))

Presents a unified approach to architectural structures and construction technology to enable students to integrate design, engineering, and construction, while providing an understanding of how material/ component/system decisions impact the work of architects, engineers, and constructors. Using a series of case-studies and project-based assignments, students learn about the various structural systems and construction methods used in the design of buildings. The evolution and state-of-the-art in structure and construction strategies will be discussed to provide requisite breadth and depth. Topics covered include: structural and building codes; structural systems and their layout planning; foundation systems; construction methods and technologies in wood, steel, concrete, and masonry; sustainability considerations; detailing; and digital modeling. 4 undergraduate hours. 4 graduate hours. Prerequisite: ARCH 231, ARCH 232 and ARCH 433.

ARCH 451  Theory & Design Steel & Timber credit: 4 Hours. ([https://courses.illinois.edu/schedule/terms/ARCH/451/](https://courses.illinois.edu/schedule/terms/ARCH/451/))

Analysis and design of steel and timber structures for buildings. Steel columns, beams, trusses, connections, roof and floor framing systems; timber beams, columns, roof and floor framing systems. 4 undergraduate hours. 4 graduate hours. Prerequisite: ARCH 352.

ARCH 452  Theory of Reinforced Concrete credit: 4 Hours. ([https://courses.illinois.edu/schedule/terms/ARCH/452/](https://courses.illinois.edu/schedule/terms/ARCH/452/))

Concrete materials; behavior of reinforced concrete construction; behavior and design of structural elements, one-way slabs, beams, and girders; columns; ACI code requirements; and introduction to continuity in reinforced concrete structures. Course Information:4 undergraduate hours. 4 graduate hours. Prerequisite: ARCH 352.

ARCH 468  Overseas Architectural Studies credit: 3 Hours. ([https://courses.illinois.edu/schedule/terms/ARCH/468/](https://courses.illinois.edu/schedule/terms/ARCH/468/))

This course is designed to enrich the professional development of students in a study abroad location. Students participate in thematic workshops, seminars, lectures and field trips focused on understanding and analyzing architectural and urbanistic landmarks and settings on site through both directed and independent assignments. 3 undergraduate hours. No graduate credit. May be repeated in separate terms up to 6 hours. Prerequisite: Senior standing in the School of Architecture.
ARCH 471  Fundamentals of Arch Design  credit: 6 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/471/)
Basic architectural design methods, fundamentals, principles and concepts including creative problem solving in two- and three-dimensions. 6 undergraduate hours. 6 graduate hours. Prerequisite: Limited graduate standing in Architecture and concurrent enrollment in ARCH 231.

ARCH 472  Arch Des in Landscape & Cities  credit: 6 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/472/)
Intermediate architectural design methods, fundamentals, principles and concepts focusing on buildings in landscape and urban contexts. 6 undergraduate hours. 6 graduate hours. Prerequisite: ARCH 471 and concurrent enrollment in ARCH 233.

ARCH 473  Architectural Design and Performance  credit: 6 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/473/)
Schematic design and development of a small-scale public building emphasizing the integration of the basic elements of building: materials, details, structure, technology, program, life safety, and universal design. 6 undergraduate hours. 6 graduate hours. Prerequisite: ARCH 371 and ARCH 372.

ARCH 474  Architectural Design and Making  credit: 6 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/474/)
Building design that emphasizes the creative process of making, experimentation, and theories of contemporary methods and materials. Projects focus on translating design ideas at multiple scales into reality through computation, representation, or production, utilizing fabrication processes. Outcomes foreground entrepreneurial design thinking and team-based learning. 6 undergraduate hours. 6 graduate hours. Prerequisite: ARCH 473.

ARCH 475  Arch Design & Development  credit: 6 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/475/)
Schematic design and development of a small-scale public building emphasizing the integration of the basic elements of building: materials, details, structure, technology, program, life safety, and universal design. 6 undergraduate hours. 6 graduate hours. Prerequisite: ARCH 374 or ARCH 472.

ARCH 476  Arch Design & Exploration  credit: 6 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/476/)
Exploration of boundaries of architecture and the built environment. Focused exploration into specific design topics, such as issue-oriented building problems, urban design theory, intermediate building design and site planning theory, human-environment relationship theory, interdisciplinary design, and architectural design and presentation methods. 4 undergraduate hours. 4 graduate hours. Prerequisite: ARCH 475.

ARCH 481  Concepts and Theories of Architectural Design  credit: 1 to 3 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/481/)
The first in a series of four introductory courses exploring the theoretical and practical foundations architecture and the built environment. This course introduces basic theories of architecture. It creates awareness of design concepts. Course content is arranged in three topical areas: Architecture and People, Architecture and Place, and Making Architecture. Each topical area addresses roles of designers and architects in contemporary and historical perspectives. No undergraduate credit. 1 to 3 graduate hours. Prerequisite: Restricted to graduate students.

ARCH 482  Drawing and Modeling  credit: 1 to 3 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/482/)
This course explores the theoretical and practical foundations of architecture and the built environment. It provides an introduction to the architectural graphic communication skills that architects use to visualize, analyze, and record creative thoughts including freehand sketching, architectural delineation, and digital applications. No undergraduate credit. 1 to 3 graduate hours. Prerequisite: Restricted to graduate students.

ARCH 483  Strategies of Architectural Design  credit: 1 to 3 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/483/)
Strategies of Architectural Design focuses on understanding the importance of site in relationship to human scale and the built environment through precedent analysis of typology, street, block and neighborhood. In addition, students will be introduced to basic strategies of architectural design and how these strategies are implemented through tectonic and materiality. No undergraduate credit. 1 to 3 graduate hours.

ARCH 484  Representation  credit: 1 to 3 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/484/)
This course develops understanding of how architects represent ideas, values and meaning in the built environment. The course focuses on three topic areas: • analysis and representation of existing contexts, including climate, built environment and natural features • 2d and 3D graphic communication techniques and tools • analog and digital modeling techniques and tools. Students will be introduced to multiple relevant software tools and acquire basic skills in each. No undergraduate credit. 1 to 3 graduate hours.

ARCH 490  Special Topics in Contemporary Architecture  credit: 1 to 4 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/490/)
Selected topics in and applications of contemporary architecture; see Class Schedule or department office for current topics. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated in separate terms up to 12 undergraduate hours or 8 graduate hours, if topics vary. Prerequisite: Consent of instructor. For majors only.

ARCH 491  Arch Professional Internship  credit: 0 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/491/)
Full-time or part-time professionally supervised field experience in design intended to introduce students to the practice of architecture in a commercial firm or agency of government. Students work in the school-approved firm or agency of their choice. Written work reports and reflective experiential learning reports are required. 0 undergraduate hours. 0 graduate hours. Approved for S/U grading only. May be repeated in separate terms a maximum of 3 times. Prerequisite: Graduate standing or upper-level undergraduate standing, or consent of instructor. For students enrolled in the BSAS and M.Arch. programs of study only.

ARCH 498  Directed Research in Arch  credit: 1 to 4 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/498/)
Participation in on-going research projects which may include energy management, environmental perception, facilities development, building science, and other topics. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated to a maximum of 8 hours. Prerequisite: Approval of written proposal by instructor and Director of School.

Information listed in this catalog is current as of 06/2023
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ARCH 530  Management in Architecture  credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/530/)
Study of management and business administration topics relevant to the architecture profession. The application of: marketing, ethics, accounting, organizational behavior, quantitative analysis, finance, operations, economics, and strategic planning to the field of architecture. Management and economic issues that influence and motivate commercial, industrial, institutional, and individual clients are addressed. Prerequisite: Graduate standing in Architecture.

ARCH 534  Building Economics  credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/534/)
Study of factors affecting cost of building including: the building market, construction cost, estimates and cost control, time value of money and building life-cycle cost, measuring the worth of investments, depreciation and tax consideration of cash-flows. Prerequisite: Graduate standing or consent of instructor.

ARCH 536  Planning and Design of Structural Systems  credit: 4 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/536/)
This course addresses the selection, planning, and preliminary design of structural systems for buildings. Emphasis is on understanding structural systems and their components as part of an integrated building system. Topics covered include a review of concepts from statics and strength of materials, structural requirements of strength-stiffness-stability, structural planning considerations, gravity loads and systems, lateral loads and systems, soils and foundations, and cable-net and other facade systems. 4 graduate hours. No professional credit. Prerequisite: ARCH 232 and ARCH 433 or consent of instructor.

ARCH 537  Environmental Control Systems II  credit: 4 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/537/)
This course investigates the control of thermal and luminous environments with an emphasis on active means of controls and building envelope design. Specific topics include: heating and cooling load and energy calculations; primary (boilers, chillers, etc.) and secondary (comfort delivery) mechanical systems; indoor air quality; energy, lighting, and daylighting codes and metrics; electric lighting properties, selection, design, and calculations; advanced daylighting strategies and calculations; visual comfort assessment; curtain wall and masonry systems; and rain screen principles. 4 graduate hours. No professional credit. Prerequisite: ARCH 434 or consent of instructor.

ARCH 544  Bldg Sys & Design Integration  credit: 4 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/544/)
Advanced course on building design for greater performance, including the study of: the anatomical and functional variations of building subsystems and their design implications; inter-system relationships and synergistic integration of building subsystems into the overall building; and the strategies for designing buildings of high functional performance and greater overall value. Term paper is required for 4 hours credit. Prerequisite: Graduate standing in Architecture or consent of instructor.

ARCH 545  Design & Constructability  credit: 3 or 4 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/545/)
Advanced course on building design for greater constructability, including material alternatives and their architectural, performance, and construction implications; the implications of the specifics of design on the range of applicable construction methods, and therefore, on construction productivity and economy; and the strategies for designing buildings of high constructability and greater overall value. Term paper is required for 4 hours credit. Prerequisite: ARCH 544 or consent of instructor.

ARCH 550  Design of Steel and Reinforced Concrete Structures II  credit: 4 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/550/)
Analysis and design of structural steel members subject to combined forces; analysis and design of bolted and welded joints, and simple connections. Presentation of reinforced concrete slab and roof systems and their characteristics; design of one-way slab-joist systems; design of multi-span reinforced concrete beams under pattern loading; influence lines and practical design of continuous beams; deflection of reinforced concrete beams and slabs; development length and bar cut-offs; design of short and slender reinforced concrete columns including biaxial bending 4 graduate hours. No professional credit. Prerequisite: ARCH 433. Restricted to graduate students in the School of Architecture.

ARCH 551  Structural Analysis  credit: 4 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/551/)
Advanced problems in the analysis of statically determinate structures; general theories and methods of analysis of statically indeterminate structures by geometric and energy methods; and introduction to theory of plastic design. Prerequisite: ARCH 451 and ARCH 452.

ARCH 552  Soil Mech and Foundations  credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/552/)
Soil properties and site exploration; stresses in soils; soil consolidation and settlement; shear strength of soils; bearing capacity; design of spread and combined footings; mats; pile foundations; lateral soil pressure and retaining walls. Prerequisite: ARCH 452 and ARCH 551.

ARCH 553  Advanced Reinforced Concrete Design  credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/553/)
Strengthening, evaluation, and repair of existing structures; design of two-way slab systems using direct design method; design of two-way slab systems using equivalent frame method; design of post-tensioned concrete systems; design of shear walls; design of deep beams. 3 graduate hours. No professional credit. Prerequisite: ARCH 550; ARCH 551; credit or concurrent registration in ARCH 560 or consent of instructor. Restricted to graduate students in the School of Architecture.

ARCH 554  Adv Steel Design  credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/554/)
Advanced topics in the design of steel structures; critical study of the AISC specification; design of steel members and their connections; composite structures; and the analysis and design of continuous structures and tall buildings. Prerequisite: ARCH 560 or consent of instructor.

ARCH 555  Prestressed Concrete Design  credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/555/)
Theory and design of prestressed concrete structures and suspension shell structures. Prerequisite: ARCH 553 or consent of instructor.

ARCH 556  Advanced Structural Planning  credit: 4 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/556/)
Study of the loads, functional and spatial requirements, and construction problems in the selection and design of structural systems for buildings; cost estimates; and integration of mechanical and electrical equipment. Prerequisite: ARCH 552 and ARCH 553; credit or concurrent registration in ARCH 554 and ARCH 555, or consent of instructor.
ARCH 573 Design: Technology and Performance  credit: 6 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/573/)
Design studio investigations of buildings and systems focusing on structure, enclosure, technology and performance. Integration of building materials, components and systems and their impact on the design, construction, and sustainability of buildings. Field trips may be required. 6 graduate hours. No professional credit. May be repeated in separate terms to a maximum of 12 credit hours. Prerequisite: Graduate standing or consent of instructor.

ARCH 574 Design: Architecture and Urban Design  credit: 6 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/574/)
Design studio investigations of issues that impact urban habitats, buildings and people. Architecture and urban design, preservation, and adaptation of new and existing buildings, cities, districts, public realms and urban environments. Designing and preserving buildings and communities in a sustainable manner. Field trips may be required. 6 graduate hours. No professional credit. May be repeated in separate terms to a maximum of 12 credit hours. Prerequisite: Concurrent enrollment in ARCH 536 or consent of instructor.

ARCH 557 Seismic Analysis and Design  credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/557/)
This course introduces the basic concepts of seismology, vibration theory, and their relevance to building structural design. The course gives students the opportunity to understand the codes and their application. The class will explore seismic forces and distribution in a building through computer modeling, calculation-based exercises, and two projects. 3 graduate hours. No professional credit. Prerequisite: ARCH 551 or ARCH 536 or consent of instructor. Students may be concurrently enrolled in ARCH 551.

ARCH 558 Structural Wood Design  credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/558/)
Analysis and design of wood structures for buildings; response of wood buildings to gravity and lateral loads; design of structural elements: beams, columns, beam-columns, members in tension, and trusses using NDS specifications; connections; plywood panels; diaphragms and shear walls. Prerequisite: ARCH 451 or equivalent.

ARCH 559 Structural Masonry Design  credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/559/)
Engineering properties of masonry materials; codes and standards for masonry structures; analysis and design of masonry structures including multiistory buildings and arches. Prerequisite: ARCH 452 or equivalent.

ARCH 560 Advanced Structural Analysis  credit: 3 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/560/)
Advanced theory and analysis of statically indeterminate structures, recognizing effects due to temperature, settlement, and fabrication errors; matrix methods focusing on computer analysis techniques; introduction to plastic analysis and design. Prerequisite: ARCH 551.

ARCH 563 Human-centric Research for Designed Environments  credit: 4 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/563/)
Introduces research methods and techniques for investigating the relationship between people and designed environments they inhabit. Approaches for gathering and analyzing social and behavioral data are introduced. Results are applied as evidence in environmental design decision-making to achieve healthier environments. Same as LA 563. 4 graduate hours. No professional credit. Prerequisite: Graduate standing in architecture, landscape architecture, or urban and regional planning or consent of instructor.

ARCH 571 Design: Detail and Architectonics  credit: 6 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/571/)
Design studio investigations of multiple techniques and methodologies addressing the design and fabrication of small-scale architectural constructions, explorations of specific sites and places, and interdisciplinary projects. Field trips may be required. Shop safety orientation required. 6 graduate hours. No professional credit. May be repeated in separate terms to a maximum of 12 hours. Prerequisite: Graduate standing or consent of instructor.

ARCH 572 Design: Health and Well-being  credit: 6 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/572/)
Design studio explorations responding to social, economic, political, and behavioral dimensions of human existence and settlement to encourage healthier designed environments. Projects investigate the experience of physical environments at the human scale and socially sustaining design strategies addressing diverse human needs. Field trips may be required. 6 graduate hours. No professional credit. May be repeated in separate terms to a maximum of 12 hours. Prerequisite: Graduate standing or consent of instructor.
ARCH 590 Directed Research  credit: 0 to 8 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/590/)
Nature and scope of projects to be determined through consultation between student and faculty advisor; open to architecture and landscape architecture majors as well as those from other disciplines who wish to engage in interdisciplinary work. 0 to 8 graduate hours. No professional credit. Approved for Letter and S/U grading. May be repeated by MArch students in the same or separate terms to a maximum of 12 hours. PhD students may repeat in the same term to a maximum of 12 hours or in separate terms up to 18 hours. Prerequisite: Consent of instructor.

ARCH 591 Special Problems in Architectural History and Theory  credit: 3 to 4 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/591/)
Examines historical and/or theoretical problems in the history of architecture, the built environment, and related designed objects and arts in relation to emerging, interdisciplinary research. Topics can include thematic investigations of historical, conceptual, aesthetic, and theoretical problems; the work of particular architects and/or patrons; specific buildings or environments in a single or multiple geographic regions or periods. 3 to 4 graduate hours. No professional credit. May be repeated in separate terms to a maximum of 12 hours. Prerequisite: Consent of instructor. Graduate Standing.

ARCH 592 Special Problems in Urbanism  credit: 2 to 4 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/592/)
Addresses emerging issues and research focused on cities, regions and urbanism, with particular focus on issues pertinent to architecture. Topics may include urban theories, morphological studies, social, political and economic influences in cities, sustainable urbanism, comparative analysis or cities, and urbanism in global contexts. 2 to 4 graduate hours. No professional credit. May be repeated to a maximum of 12 hours. Syllabi for this course vary by instructor and semester. Prerequisite: Graduate Standing.

ARCH 593 Special Problems in Detail and Fabrication  credit: 2 to 4 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/593/)
The investigation and study of the design and fabrication of architectural components and assemblies. 2 to 4 graduate hours. No professional credit. May be repeated as topics vary to a maximum of 12 hours. Prerequisite: Restricted to Graduate Students.

ARCH 594 Special Problems in Building Performance  credit: 2 to 4 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/594/)
In-depth investigation of emerging issues and specific areas of research interest beyond what is covered in graduate courses of regular offering in the area of building performance. Students, as individuals or in groups, are expected to propose a research plan and methods for a specific topic of research interest in consultation with the instructor, and execute it under the guidance of the instructor through consultation on a regular basis. 2 to 4 graduate hours. No professional credit. May be repeated to a maximum of 12 hours. Prerequisite: Restricted to Graduate Students.

ARCH 595 Spec Prob Struct Theory & Des  credit: 2 to 4 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/595/)
Individual or group investigation and study in architectural engineering application; research in economy and design in correlation with architectural, mechanical, and structural requirements. May be repeated to a maximum of 12 hours. Prerequisite: Consent of instructor.

ARCH 596 Special Problems in Health and Wellbeing  credit: 2 to 4 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/596/)
In-depth investigation of emerging issues and specific areas of research interest by individuals or groups. Topics are those beyond what is covered in graduate courses regularly offered in the area of health and wellbeing, including theories and knowledge of specific buildings or projects in diverse global contexts; comparative studies; and theoretical, conceptual, and health-focused problems. 2 to 4 graduate hours. No professional credit. May be repeated to a maximum of 12 hours. Prerequisite: Restricted to Graduate Students.

ARCH 597 Special Problems in Architectural Design  credit: 2 to 4 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/597/)
Individual investigation of building types and systems, aesthetic theories, programming and other problems in architectural design. 2 to 4 graduate hours. No professional credit. May be repeated to a maximum of 12 hours. Prerequisite: Restricted to Graduate Students.

ARCH 598 Specialized Architectural Practice  credit: 0 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/598/)
This course adds an academic dimension to professionally supervised field experiences in which problems in architectural design and technology are defined, researched, and solved. Advanced doctoral students are introduced to applied research processes in any of architecture’s sub-disciplines. Sites of applied research may include commercial firms, not-for-profit organizations, and government agencies. Students work in school-approved firms or agencies of their choice. Written accounts of work accomplished, documentation of research questions developed and pursued, and reflective experiential learning reports must be submitted for evaluation. Field experiences may be part time or full time. 0 graduate hours. No professional credit. Approved for S/U grading only. May be repeated for up to 11 months total of training. This course is intended to facilitate CPT in professionally focused environmental design research for students in the PhD program. Prerequisite: Required research methods course (ARCH 505/LA 505 or ARCH 563/LA 563 or equivalent) and approval of both PhD program chair and student’s PhD adviser. For PhD students who have completed stage 1 of coursework.

ARCH 599 Thesis Research  credit: 0 to 16 Hours. (https://courses.illinois.edu/schedule/terms/ARCH/599/)
For doctoral students in Architecture who have completed their required coursework and are working on their dissertations or who are completing their dissertation proposals prior to their preliminary examinations. Consists of focused writing of the dissertation or proposal as directed by Dissertation Advisor. Arranged sessions provide time devoted to meeting writing goals; discussion of the writing process; advisor feedback on students' writing, and guidance on how to make progress on the writing. Reserved for use by Ph.D. students in the writing phase of their dissertation work or in the semester leading to their preliminary examinations. In extraordinary cases it may be approved for use by M.S. students submitting a written thesis. 0 to 16 graduate hours. No professional credit. Approved for S/U grading only. May be repeated in separate terms to a maximum of 32 hours. Prerequisite: Consent of instructor and graduate program coordinator. Restricted to Ph.D. Students.