

# INFO - INFORMATICS

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

## Courses

**INFO 102 Little Bits to Big Ideas** credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/102/>)  
Broad introduction to the nature, capabilities, and limitations of computing. Topics range from the way data is represented and stored, to the way today's computers work, to the general ideas of algorithms and computational efficiency, to the future of computing. Covers "Great Ideas" across various areas of the field, including, for example, cryptography and internet security, problem solving, modeling and simulation, and artificial intelligence. Same as CS 102.

**INFO 199 Undergraduate Open Seminar** credit: 1 to 3 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/199/>)  
May be repeated in separate terms to a maximum of 6 hours.  
Prerequisite: Consent of instructor.

**INFO 202 Social Aspects Info Tech** credit: 3 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/202/>)  
Same as IS 202 and MACS 202. See IS 202.  
This course satisfies the General Education Criteria for:  
Social Beh Sci - Soc Sci

**INFO 303 Writing Across Media** credit: 3 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/303/>)  
The ability to communicate effectively in multiple types of media is a crucial part of literacy in our society. In this course, students will explore the intersections of various media: print, film, images, sound, etc. Students will consider the ways in which writing—as an object and as a practice—is shaped by multimodal interactions. Also integrates practical activities with broader theoretical issues in order to provide effective strategies for designing multimedia presentations, projects, and texts that integrate photography, video, and sound. Same as WRIT 303.  
This course satisfies the General Education Criteria for:  
Advanced Composition

**INFO 310 Computing in the Humanities** credit: 3 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/310/>)  
Same as IS 310. See IS 310.

**INFO 325 Social Media and Global Change** credit: 3 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/325/>)  
Same as AFST 325, ASST 325, EPOL 325, EPS 325, EURO 325, LAST 325, REES 325, and SAME 325. See EPOL 325.

**INFO 326 New Media, Culture & Society** credit: 3 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/326/>)  
Same as MACS 326. See MACS 326.

**INFO 333 User Experience Design In Action** credit: 3 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/333/>)  
Introduces you to principles and techniques via several approaches to user experience design. We'll explore UX from different angles, including visual and sensory components, infrastructure and data, and social science evaluation and research methods. Along the way students tackle hands-on assignments that relate to tried-and-true methods, like rapid prototyping, usability or multimodal communication, as well as emergent areas such as AI-based generation or interactive data visualization.  
Prerequisite: Restricted to sophomore standing or above.

**INFO 345 Digital & Gender Cultures** credit: 3 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/345/>)  
Same as GWS 345, MACS 345, and SOC 345. See MACS 345.

**INFO 390 Special Topics** credit: 1 to 3 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/390/>)  
Explores a variety of informatics topics. Topics and prerequisites vary by section; see current Class Schedule for details. May be repeated up to 6 hours if topics vary.

**INFO 399 Individual Study** credit: 0 to 3 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/399/>)  
Individual study in a subject related to informatics not covered in normal course offerings. Approved for Letter and S/U grading. May be repeated in separate terms to a maximum of 6 hours. Prerequisite: Consent of instructor.

**INFO 407 Introduction to Programming Python for Data Science** credit: 3 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/407/>)  
For students who want to learn about solving problems common in data sciences but have little or no programming experience. The class is asynchronous (students can access material on-line but within specified timeframes) and taught online. Data Science lies at the intersection of statistics and computer science and focuses on extracting information from data. This class will immerse students on topics of software construction, design, programming paradigms and the semantic and syntax of the Python language and then focus on some of the necessary workflows to move raw data into information. The class will explore common Python modules (libraries) used in data science, natural language processing, statistics, mathematics, data management (acquiring, cleaning, reshaping, organizing, persisting) and visualizations. 3 undergraduate hours. 3 graduate hours. Credit is not given toward graduation for BOTH INFO 407 and INFO 490 MH "Intro to Prog for the Data Science" sections.

**INFO 415 Makerspace: Open Studio** credit: 3 or 4 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/415/>)  
Introduces learners to a variety of rapid prototyping and fabrication techniques in collaboration with the CU Community Fab Lab. Weekly class lecture will introduce students to trends and ideas in Makerspaces, Peer-to-Peer learning, design processes, creativity, computational thinking, and practicing makers. Each week students will be provided a general project prompt and set to work with a tool area in response to a simple design exploration challenge. Over the course of the semester they will have an opportunity to become familiar with the basics of several advanced small-scale manufacturing tools, such as 3D printers, laser engravers, digital embroidery machines, graphic drawing tablets and small board electronics. The class will have both group and independent work and make use of an online portal for assignment hand-in and peer-feedback. Please note that this course will emphasize self-guided learning and time management, students will need to rely on online tutorials and information resources to explore methods and complete much of the work in a rapid-response fashion; students will need to come into FabLab open hours outside of normal lab times to complete projects. Projects will be small and contained, in order to allow for exposure to several tools and mediums. Students who have taken a different Makerspace course at the FabLab previously are eligible to participate in this class, but it is also not a requirement. Graduate students will have an additional documentation project component emphasizing digital literacy. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours. Credit is not given for INFO 415 and INFO 490 ALU/ALG "Makerspace: Open Studio" sections.

INFO 416 Makerspace: Game Studies credit: 3 or 4 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/416/>)

A foray into game studies via makerspace production mediums. Students will study the role of play, tinkering and gaming in design, research and innovation and be challenged to learn a variety of makerspace production tools and techniques to create games. This course will include three major components (1) physical board game design, (2) introductory computer game design and (3) investigation into the narrative themes, artistic production, interaction mechanics and culture that make games engaging. During the course, students will prototype both playable board and video games, followed by iterating through to a final version of a game of their choice. Class will meet in the CU Community Fab Lab in Art Annex II. Students who have taken a different makerspace class before are encouraged to enroll. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours. Credit is not given for INFO 416 and INFO 490 A/AG "Makerspace: Game Studies" sections.

INFO 418 Makerspace: Escape Rooms credit: 3 or 4 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/418/>)

This course will explore the intersection of storytelling, interaction design, and user experience through the design of escape rooms. In the past couple years escape rooms have been on the rise, changing from simple locked boxes in an open room to complex adventures spanning multiple rooms involving electronics, sound design, storytelling, and even live actors. This class will be primarily focusing on the manufacturing and electronics work that goes into making an immersive escape room experience. Over the span of the course, students will become familiar with the basics of several advanced small-scale manufacturing tools, such as laser engravers, electronic cutters, and 3D printers/scanners. They will also learn how to program small-board electronics (Arduinos and IoT boards, servos, electronic locks, and/or lights), and incorporate them meaningfully into puzzles in order to achieve client's goals. Students will design, prototype, playtest, and iterate collaboratively on the puzzles and interactive elements. 3 undergraduate hours. 4 graduate hours. Credit is not given for INFO 418 and INFO 490 B, BG, ERU or ERG "Makerspace: Escape rooms" sections.

INFO 419 Makerspace: Learning in Community credit: 3 or 4 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/419/>)

Explores the history and function of community and education-oriented makerspaces. Students will evaluate emergent makerspace curricula for learning in formal environments (e.g., schools), and informal settings (e.g., libraries). Includes community site visits to observe informal STEAM programs. A final project will involve the development of a makerspace workshop activity to be used at a community event. Students will be familiarized with several methods of teaching and learning rapid prototyping and iterative design techniques. Additional fees may apply. See Class Schedule. 3 undergraduate hours. 4 graduate hours. Prerequisite: INFO 415 strongly encouraged, either prior to taking INFO 419, or with concurrent enrollment.

INFO 424 Musical Informatics credit: 3 or 4 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/424/>)

A 21st century approach to music theory: fundamental elements of music illustrated through logical and mathematical concepts, unencumbered by stylistic considerations. Defines the internal structure of sounds and presents a few general methods of organizing them into complex compositions. Intended for musicians having limited familiarity with mathematics, as well as scientifically inclined students with little musical background. 3 undergraduate hours. 4 graduate hours.

INFO 427 Data, Machines and the Python credit: 3 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/427/>)

A continuation to the introductory course on Data Science (INFO 407). This advanced course on Data Science is completely taught online and scheduled asynchronously (you decide where it best fits in your week). The course consists of several tracks including Machine learning and advanced Python skills. There will be lessons that guide you to learn advanced techniques in data science and you will also be introduced to machine learning algorithms. In addition, there will be a few lessons that help you advance your Python knowledge and software development skills. This course can mainly be considered as an applied course where you will learn by doing. In many cases, you will first write a reduced implementation before using an established library. The second half of the course will be focused on data driven individual projects along with weekly lessons. 3 undergraduate hours. 3 graduate hours. Credit is not given for INFO 427 and INFO 490 MH2 "Data, Machines and the Python" sections. Prerequisite: Students should have either taken INFO 407; OR Have at least 1 year of programming experience using Python; OR Be comfortable with NumPy, Pandas, Matplotlib, NLTK; OR Have a strong ability and passion for learning. Junior, Senior or Graduate standing.

INFO 448 Computer Music credit: 3 or 4 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/448/>)

Introduction to the multiple ways computers are used in music, with an emphasis on digital sounds synthesis and composition. Elements of acoustics, psychoacoustics, and programming are introduced in order to allow students to use and modify the existing software DISSCO/Sound Maker developed at UIUC. 3 undergraduate hours. 4 graduate hours.

INFO 490 Special Topics credit: 1 to 4 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/490/>)

Topics of current interest. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated if topics vary. Prerequisite: Consent of instructor. Other prerequisites as specified for each topic offering. See Class Schedule.

INFO 491 Ugrad Bioinformatics Seminar credit: 0 to 2 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/491/>)

Introduces the field of bioinformatics and computational biology. Same as CPSC 491. 0 to 2 undergraduate hours. No graduate credit. Approved for Letter and S/U grading. May be repeated in separate terms to maximum of 2 undergraduate hours. Prerequisite: Consent of instructor.

INFO 500 Orientation Seminar credit: 0 or 1 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/500/>)

A broad introduction to faculty research in each Informatics Area. Consists of weekly presentations by Informatics faculty highlighting their recent research, practice, and related concepts. Approved for S/U grading only. May be repeated in separate terms to a maximum of 2 hours. Prerequisite: Graduate standing in any field.

INFO 510 Research Practicum credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/510/>)

A one semester directed research project supervised by a member of the informatics faculty in the student's area of specialization or closely related area. These are intended to be practical research, not just literature surveys, and must have a definite output such as a paper or demonstration project. The research should be relevant to the thesis work or preparatory work to support the thesis. Informatics students must take two semesters, usually each semester should be under a different Informatics faculty member, but with the concurrence of their advising committee both may be taken under a single faculty member. Approved for S/U grading only. May be repeated in separate terms to a maximum of 8 hours. Prerequisite: Graduate standing in any Informatics.

INFO 555 Advanced Educational Technologies for Engagement and Interactive Learning credit: 4 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/555/>)

Same as CI 555 and EPSY 555. See EPSY 555.

INFO 590 Advanced Special Topics credit: 1 to 4 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/590/>)

Subject offerings of new and developing areas of knowledge in Informatics, intended to augment existing curriculum. See Class Schedule for specific topics and prerequisites. 1 to 4 graduate hours. No professional credit. May be repeated if topics vary. Prerequisite: Graduate Student Standing.

INFO 591 Grad Bioinformatics Seminar credit: 0 to 2 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/591/>)

This seminar series focuses on research in the field of bioinformatics and computational biology. Same as ANSC 591 and CPSC 591. 0 to 2 graduate hours. No professional credit. Approved for Letter and S/U grading. May be repeated in separate terms to a maximum of 4 hours.

Prerequisite: Consent of instructor.

INFO 597 Individual Study credit: 2 to 4 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/597/>)

Individual study in a subject related to informatics not covered in normal course offerings. May be repeated in same term for a maximum of 8 hours or separate terms for a maximum of 16 hours if topics vary.

Prerequisite: Consent of instructor.

INFO 599 Thesis Research credit: 0 to 16 Hours. (<https://courses.illinois.edu/schedule/terms/INFO/599/>)

Research for Ph.D. thesis. May be repeated in separate terms.

Prerequisite: Instructor approval required.