# Information Sciences (INFO SCI)

## Courses

**INFO SCI 198. First Year Seminar. 3 Credits.**
Reserved for New Incoming Freshman.

**INFO SCI 201. Information, Computers and Society. 3 Credits.**
A survey of the social, legal and ethical impacts of computers on individuals and society.
Fall Only.

**INFO SCI 210. Information Problems. 3 Credits.**
An introduction to understanding and solving information problems, including: a survey of the field of information science; practice in algorithmic thinking; techniques for finding, assessing, organizing, and presenting information; and confrontation with ethical and value issues.
Spring.

**INFO SCI 299. Travel Course. 1-6 Credits.**
Travel courses are conducted to various parts of the world and are led by one or more faculty members. May be repeated to different locations.
P: cons of instr & prior trip arr & financial deposit.

**INFO SCI 302. Introduction to Data Science. 3 Credits.**
This course provides an introduction to data science and provides an overview of useful data science tools. Topics covered will include tools, database management, retrieval and management of data, best practices for effectiveness and mitigating risk.
P: At least 18 credits in COMP SCI, INFO SCI or COMM
Spring.

**INFO SCI 308. Information Technologies. 3 Credits.**
A survey of information technologies, their operations and limitations, and how the major electronic technologies are changing and affecting both the workplace and the household.
P: 15 credits of Comp Sci, Info Sci or Comm
Fall and Spring.

**INFO SCI 332. Mobile Platforms and Apps. 3 Credits.**
This course has a cross-disciplinary emphasis and is suitable for INFO SCI, COMP SCI and COMM students. This course will incorporate a complete study and practice of the mobile applications world. Students will explore business models of application development and deployment. As cross-disciplinary teams, the students will design, develop and fully produce one real and unique app. While CS students will focus on the technical aspects of the product, other students in this course will focus on original content creation (such as art, news stories, social media, video games, videos, etc.).
P: At least 18 credits in COMP SCI, INFO SCI or COMM
Fall Only.

**INFO SCI 341. Survey of Gaming and Interactive Media. 3 Credits.**
This course provides students with a thorough understanding of the history, study, of the modern video game industry and video games as a creative and communicative medium. Subjects covered in this course include the history of the industry in terms of its technological and economic development. Students will also analyze how video games have evolved and used more powerful multimedia capabilities to craft narratives and virtual worlds, and critically engage with game content to analyze games and break them down into component elements to understand what makes for good design. The course will also analyze the cultural and political impact of games from psychological effects to the debate over governmental regulation. The course will also provide students with the tools they need to succeed in a variety of professions in the video game industry, from journalism to development to public relations and beyond.
P: 30 credits (sophomore standing) and COMM 102
Fall Only.

**INFO SCI 342. Game Design. 3 Credits.**
This course will introduce students to the fundamentals, concepts and tools used in the development of board games, modern 2-D and 3-D real-time interactive computer video games. The fundamentals of video game creation begin with a study of board game creation. Topics covered include game design concepts, design documents, prototyping, artificial intelligence and game mechanics. Students will pitch, design and create their own games in this course.
P: 30 credits (sophomore standing) and COMM 102
Spring.

**INFO SCI 361. Introduction To Information Assurance & Security. 3 Credits.**
An exploration of the fundamentals of information assurance and security (IAS). The course will introduce the underlying concepts of IAS in context of today's society. It will explore the security & ethical issues in information and computing from the perspective of today's computing world. It will discuss the appropriate remedies and defense strategies in the wake of today's security threats and attacks. Class topics will focus on physical security, cyber security, network security and software security through lectures and hands on experiments. This course will be of interest to students, who wish to obtain an understanding of the basic principles and practices in IAS. It will cover the fundamental concepts in IAS necessary for understanding the threats to security as well as various defenses against those threats.
P: COMP SCI 316
Fall Odd.

**INFO SCI 390. Technical Writing. 3 Credits.**
Scientific and technical writing for professional and lay audiences, including news articles and features, laboratory reports, training and procedure manuals, grant and contract proposals and technical reports.
P: Eng Comp 100 or 164 or ACT English score of 25 or higher; and completion of nat sci gen educ req.

**INFO SCI 410. Analytics and Information Problems. 3 Credits.**
Practice in solving information problems and documenting skills for external audiences.
P: senior status
Spring.

**INFO SCI 411. Statistical Techniques and Decision Modeling. 3 Credits.**
This course develops an understanding of core and advanced statistical concepts used in data science. It builds on core statistical concepts covered in other foundational statistics courses. Topics include hypothesis testing, classical and Bayesian statistical inference, multiple regression, logistic regression, analysis of variance, and non-parametric methods. The course also introduces students to decision modeling techniques including Monte Carlo simulation, linear and non-linear optimization, decision trees, and risk analysis. The course includes hands-on exercises.
P: 15 credits of COMP SCI, INFO SCI, or COMM
Spring.

**INFO SCI 412. Data Mining and Predictive Analytics. 3 Credits.**
The course discusses data mining and introduces students to machine learning concepts used in analytics. It provides the basics of building predictive models using structured and unstructured data and clustering, association, and classification techniques. It covers predictive modeling using regression, survival analysis, artificial neural networks, support vector machines, decision trees, and genetic algorithms. The courses involves hands-on exercises with WEKA, Python, and R.
P: MATH 260 or INFO SCI 302 or INFO SCI 411
Fall Even.

**INFO SCI 430. Information, Media and Society. 3 Credits.**
The role of information in society, including interpersonal, mass, and institutional sources, in producing a range of effects on individuals, groups, and society as a whole; critical examination of the changing information environment in legal, economic, political, and social contexts.
P: at least 15 credits of core supporting courses in Communication or declared student in Information Sciences.
Spring.

**INFO SCI 440. Information and Computing Science Practicum. 3 Credits.**
A project course in which teams submit proposals to work in an information problem. Projects provide experience in leadership roles, resource allocation, scheduling, documentation, client relations, and presentation. Problems typically draw on a wider array of skills than in other individual classes.
P: sr st.
Fall and Spring.

**INFO SCI 478. Honors in the Major. 3 Credits.**
Honors in the Major is designed to recognize student excellence within interdisciplinary and disciplinary academic programs.
P: min 3.50 all cses req for major and min gpa 3.75 all UL cses req for major.
Fall and Spring.

**INFO SCI 495. Teaching Assistantship. 1-6 Credits.**
The student and supervising teacher must prepare a statement that identifies the course with which the assistantship will happen, objectives for the assistantship, and expectations in order to fulfill the course objectives. Students are not eligible to receive credit in both the course they assist the instructor with and the teaching assistantship in the same semester. Typically student has previously taken the course prior to enrollment in the assistantship. Course is repeatable for credit.
Fall and Spring.

**INFO SCI 496. Project/Research Assistantship. 1-6 Credits.**
The student must prepare a research proposal, and both parties should identify the research arrangement and how the student will complete the work to fulfill the course objectives within the assigned term.
Fall and Spring.

**INFO SCI 497. Internship. 1-12 Credits.**
Supervised practical experience in an organization or activity appropriate to a student's career and educational interests. Internships are supervised by faculty members and require periodic student/faculty meetings.
P: jr st.
Fall and Spring.

**INFO SCI 498. Independent Study. 1-4 Credits.**
Independent study is offered on an individual basis at the student's request and consists of a program of learning activities planned in consultation with a faculty member. A student wishing to study or conduct research in an area not represented in available scheduled courses should develop a preliminary proposal and seek the sponsorship of a faculty member. The student's advisor can direct him or her to instructors with appropriate interests. A written report or equivalent is required for evaluation, and a short title describing the program must be sent early inthe semester to the registrar for entry on the student's transcript.
P: fr or so st with cum gpa > or = 2.50; or jr or sr st with cum gpa > or = 2.00.
Fall and Spring.

**INFO SCI 499. Travel Course. 1-6 Credits.**
Travel courses are conducted to various parts of the world and are led by one or more faculty members. May be repeated to different locations.
P: cons of instr & prior trip arr & financial deposit.