1. INFSCI 2000 INTRODUCTION TO INFORMATION SCIENCE

Description

Minimum Credits: 3

Maximum Credits: 3

Overview of the history, academic roots, conceptual structure, and methodology of information science. Explores principles and concepts that underlie information processing, including information theory, models of information storage and retrieval, and human cognition. Basic processes of information systems analysis, design and development.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PROG: School of Information Science or Sch Computing and Information; PLAN: Excluded Plans = Library & Information Science (MLIS, PHD, CERT-Advanced)

Course Attributes: Global Studies

1. INFSCI 2020 MATHEMATICAL FOUNDATIONS FOR INFORMATION SCIENCE

Description

Minimum Credits: 3

Maximum Credits: 3

Basic concepts of theoretical mathematics needed to understand theoretical work in information science with the exception of probability and statistics; in particular, concepts from set theory, graph theory, combinatorics, logic, abstract algebra, topology, and mathematical analysis.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PROG: School of Information Science or Sch Computing and Information; PLAN: Excluded Plans = Library & Information Science (MLIS, PHD, CERT-Advanced)

1. INFSCI 2040 RESEARCH DESIGN

Description

Minimum Credits: 3

Maximum Credits: 3

Beginning research design with emphasis on the basic process of inquiry. Identifying and articulating research problems, determining and describing procedures for conducting research, designing data collecting procedures, formulating testable hypotheses, interpreting and drawing conclusions from data analysis, and reporting research findings and implications.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PROG: School of Information Science or School of Computing and Information; PLAN: Excluded Plans = Library & Information Science (MLIS, PHD, CERT-Advanced)

1. INFSCI 2120 INFORMATION AND CODING THEORY

Description

Minimum Credits: 3

Maximum Credits: 3

Includes measures of information, information sources, joint and conditional uncertainty, noiseless and deterministic channels, reliable messages through unreliable channels, channel capacities, properties of codes, minimal codes, and error-detecting and error-correcting codes. Examines entropy as a measure of semantic content.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PROG: School of Information Science or Sch Computing and Information; PLAN: Excluded Plans = Library & Information Science (MLIS, PHD, CERT-Advanced)

1. INFSCI 2125 NETWORK SCIENCE & ANALYSIS

Description

Minimum Credits: 3

Maximum Credits: 3

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad Letter Grade

Course Requirements: PLAN: ISCI-MSI, ISCI-AC, BDA-ACG, SAISYS-ACG, SAIS-ACG, ISCI-PHD, INFSCI-MSI, INFSCI-AC, INFSCI-PHD

1. INFSCI 2130 DECISION ANALYSIS AND DECISION SUPPORT SYSTEMS

Description

Minimum Credits: 3

Maximum Credits: 3

Introduction to decision analysis with elements of human cognition under uncertainty, including structuring decision problems and developing creative decision options, quantifying uncertainty and preferences, and combining uncertainty and preferences to arrive at optimal decisions. Foundations needed for applying the methods of decision analysis in decision support systems. Note: can also be used to fulfill distribution requirement in cognitive science area.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PROG: School of Information Science or Sch Computing and Information; PLAN: Excluded Plans = Library & Information Science (MLIS, PHD, CERT-Advanced)

1. INFSCI 2135 PROBABILISTIC METHODS

Description

Minimum Credits: 3

Maximum Credits: 3

This seminar provides an introduction to computational approaches for probabilistic modeling and inference. A particular focus is placed on Bayesian networks, although other probabilistic models also will be studied. Medical applications are emphasized, however, the principles are general and no medical knowledge is needed to take the course. The course does not require knowledge of a computer programming language. An understanding of basic probability theory would be helpful, but is not required.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

1. INFSCI 2140 INFORMATION STORAGE AND RETRIEVAL

Description

Minimum Credits: 3

Maximum Credits: 3

Problems and techniques related to storing and accessing unstructured information with an emphasis on textual information. Overview of several approaches to information access with a primary focus on search-based information access. Covers automated retrieval system design, content analysis, retrieval models, result presentation, and system evaluation. Examines applications of retrieval techniques on the web, in multimedia and multilingual environments, and in text classification and event tracking.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PROG: School of Information Science or Sch Computing and Information; PLAN: Excluded Plans = Library & Information Science (MLIS, PHD, CERT-Advanced)

1. INFSCI 2149 INTRODUCTION TO INFORMATION SECURITY

Description

Minimum Credits: 3

Maximum Credits: 3

Introductory information security and privacy course for non-SCI students enrolled in the Graduate Certificate Program in Cybersecurity, Policy and Law. Covers fundamental issues and first principles of security and information assurance, including security policies, models and mechanisms related to confidentiality, integrity, authentication, identification, and availability issues related to information and information systems. The course will introduce students to risk management, security assurance, secure design principles, organizational security policy, legal and ethical issues in security, and standards and methodologies for security evaluation and certification.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: Plan = CPL-AC, CSPL-AC, or CSPL-MN

1. INFSCI 2150 INFORMATION SECURITY AND PRIVACY

Description

Minimum Credits: 3

Maximum Credits: 3

Fundamental issues and first principles of security and information assurance. Security policies, models and mechanisms related to confidentiality, integrity, authentication, identification, and availability issues related to information and information systems. Basics of cryptography such as key management and digital signatures, etc. And network security such as PKI, IPsec, intrusion detection and prevention. Risk management, security assurance and secure design principles. Issues such as organizational security policy, legal and ethical issues in security, standards and methodologies for security evaluation and certification.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PREQ: TELCOM 2000 or INFSCI 1070; PROG: School of Information Science or Sch Computing and Information

1. INFSCI 2160 DATA MINING

Description

Minimum Credits: 3

Maximum Credits: 3

Introduction to data mining techniques, including data preprocessing, data mining primitives, association rules, decision trees, cluster analysis, classification and machine learning, data visualization, and data warehousing. Detailed applications from a wide variety of domains.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PREQ: INFSCI 2020 (B or greater) or INFSCI 2725 (B or greater) or INFSCI Exemption-Analytics Component (Test Score 6 or higher)

1. INFSCI 2170 CRYPTOGRAPHY

Description

Minimum Credits: 3

Maximum Credits: 3

Principles of number theory, cryptographic algorithms and cryptanalysis. Steganography, block and stream ciphers, secret key encryption (DES, res, re-n), primes, random numbers, factoring, and discrete logarithms. Public key encryption (RSA, Diffie-Helman, elliptical curve cryptography, n'tru); key management, hash functions (md5, sha-1, ripemd-160, HMAC), digital signatures, certificates and authentication protocols. Cryptanalytic methods (known, chosen plaintext etc.) For secret and public key schemes (linear and differential cryptanalysis, pollard's rho method, number field sieve, etc.).

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PLAN: ISCI-MSI, ISCI-AC, BDA-ACG, BDAL-ACG, SAISSYS-ACG, SAIS-ACG, ISCI-PHD, INFSCI-MSI, INFSCI-AC, INFSCI-PHD

1. INFSCI 2204 INTRODUCTION TO TECHNICAL COMMUNICATIONS FOR INFORMATION SCIENCE

Description

Minimum Credits: 3

Maximum Credits: 3

An English language support course for international students in SIS who are non-native speakers of English. Introduces students' to strategies and skills for comprehension and production in academic English contexts. Also addresses issues of academic integrity and plagiarism.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad SN Basis

1. INFSCI 2205 TECHNICAL COMMUNICATIONS FOR INFORMATION SCIENCE

Description

Minimum Credits: 3

Maximum Credits: 3

An English language support course for international students in SIS who are non-native speakers of English. Helps develop students' strategies and skills for comprehension and production in academic English contexts. Also addresses issues of academic integrity and plagiarism.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad SN Basis

1. INFSCI 2230 CYBERCRIME

Description

Minimum Credits: 3

Maximum Credits: 3

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SU3 Basis

1. INFSCI 2300 HUMAN INFORMATION PROCESSING

Description

Minimum Credits: 3

Maximum Credits: 3

Introduction to research and theory in human cognition, including perception, attention, pattern recognition, memory, representation of knowledge, language, problem solving, reasoning, and decision making, with emphasis on modeling human cognition and implications for user interface design and design of intelligent systems.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PROG: School of Information Science or Sch Computing and Information; PLAN: Excluded Plans = Library & Information Science (MLIS, PHD, CERT-Advanced)

1. INFSCI 2350 HUMAN FACTORS IN SYSTEMS

Description

Minimum Credits: 3

Maximum Credits: 3

Introduces principles for analysis of human performance in human-machine systems. Emphasis on principles of human factors as applied to the design of systems other than the graphical user interface (GUI) that is covered in interactive systems INFSCI 2470.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PROG: School of Information Science or Sch Computing and Information; PLAN: Excluded Plans = Library & Information Science (MLIS, PHD, CERT-Advanced)

1. INFSCI 2410 INTRODUCTION TO NEURAL NETWORKS

Description

Minimum Credits: 3

Maximum Credits: 3

Introduces mathematical and computer techniques used in constructing models of information processing by parallel distributed processing (PDP) networks; principles of input-output functions and adaptation (learning) functions in single units and in networks; examines the relation between PDP networks, neurobiology, artificial intelligence, and cognition.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PROG: School of Information Science or Sch Computing and Information; PLAN: Excluded Plans = Library & Information Science (MLIS, PHD, CERT-Advanced)

1. INFSCI 2415 INFORMATION VISUALIZATION

Description

Minimum Credits: 3

Maximum Credits: 3

This course focuses on the visual design, structure, and organization of information as applied to library and information environments and web site design. Topics include visualization literacy, usability research, theories of visual perception and cognition, visualization models, visual analytics, and data graphics. The emphasis is on user and task-centered design for developing and evaluating visualization-based tools for various types of data. Practical work with visualization technologies will be included.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad Letter Grade

1. INFSCI 2430 SOCIAL COMPUTING

Description

Minimum Credits: 3

Maximum Credits: 3

Introduction to key theories and technologies of social computing. Reviews major types of social computing systems. Several social computing systems are explored and used throughout the course. Final group project focuses on designing and implementing a social web system.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

1. INFSCI 2460 SPATIAL REASONING FOR GIS

Description

Minimum Credits: 3

Maximum Credits: 3

Fundamental issues in qualitative spatial reasoning, spatial languages, and spatial decision-making. Applications of spatial reasoning including problems of navigation and interface issues for GIS.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PROG: School of Information Science or Sch Computing and Information; PLAN: Excluded Plans = Library & Information Science (MLIS, PHD, CERT-Advanced)

1. INFSCI 2470 INTERACTIVE SYSTEM DESIGN

Description

Minimum Credits: 3

Maximum Credits: 3

The environments that can or should be provided for interactive use of computers. Necessary hardware, software, and behavioral components of an interactive system; data structure considerations for various types of interactive applications; operating system fundamentals, functions, and characteristics. Emphasis on interactive operating systems, human machine dialogues, interactive graphics, programming languages, and application(s) design.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PLAN: Information Science (MS or PHD); SUB: Digital Libraries & Info Mgmt

1. INFSCI 2480 ADAPTIVE INFORMATION SYSTEMS

Description

Minimum Credits: 3

Maximum Credits: 3

Introduces key principles of adaptive information systems and modern techniques for user modeling and personalization. Covers the construction of user models and user profiles. Examines the use of various personalization techniques such as adaptive search, recommendation, and navigation support. Reviews major types of adaptive information systems and explores important application areas.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PREQ: INFSCI 2710 or 2470; PROG: School of Information Science or Sch Computing and Information

1. INFSCI 2500 DATA STRUCTURES

Description

Minimum Credits: 3

Maximum Credits: 3

Theory and application of data structures. Data and file structures and their appropriateness to various applications.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PLAN: (Information Science or Telecommunications or Interdisc Information Science or Not Candidate for Degree) or SUBPLAN: (Digital Libraries & Info Mgmt)

1. INFSCI 2510 INFORMATION SYSTEMS ANALYSIS AND DESIGN

Description

Minimum Credits: 3

Maximum Credits: 3

The focus of this course is on studies of specifications of the information systems development process. The course covers fundamental topics on two main stages of information systems development life cycle: analysis, and design. Students will become familiar in techniques to investigate, collect, organize, and structure requirements for an information system as well as understanding how to design different component of the information system to satisfy the requirements. The course hands-on experiences such as working directly with real-world clients to address an information need challenge. Students are evaluated through regular assignments, quizzes, and a course project

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PROG: School of Information Science or Sch Computing and Information ; PLAN: Excluded Plans = Library & Information Science (MLIS, PHD, CERT-Advanced)

1. INFSCI 2511 INFORMATION SYSTEMS DESIGN

Description

Minimum Credits: 3

Maximum Credits: 3

Object-oriented design best practices; principles of system architecture; design patterns; requirements traceability; construction of uml-compliant models (class, sequence, communication and package diagrams); refactoring; iterative development of system prototype. Requires knowledge of fundamental of programming concepts including abstract classes, interfaces, inheritance, polymorphism, and message passing.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PREQ: INFSCI 2510; PROG: School of information Science or Sch Computing and Information

Course Attributes: Global Studies

1. INFSCI 2540 SOFTWARE ENGINEERING

Description

Minimum Credits: 3

Maximum Credits: 3

Critical analysis of leading iterative software development processes; TSP/PSP, unified process, extreme programming and related agile processes; enterprise management and control of software projects (CMM and COBIT); configuration and change management; quality assurance and testing.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PROG: School of Information Science or Sch Computing and Information; PLAN: Excluded Plans = Library & Information Science (MLIS, PHD, CERT-Advanced)

1. INFSCI 2545 SOFTWARE QUALITY ASSURANCE

Description

Minimum Credits: 3

Maximum Credits: 3

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

1. INFSCI 2550 CLIENT-SERVER SYSTEMS

Description

Minimum Credits: 3

Maximum Credits: 3

Analysis and design of distributed systems. Emphasis on distributed applications and various protocols used in such applications. Explores algorithms for various iterative and concurrent server designs as well as the design of application level protocols. Includes various languages and operating systems.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PREQ: INFSCI 2500 or INFSCI 2500 Exemption (Test Score=1); PROG: School of Information Science or Sch Computing and Information

1. INFSCI 2560 NETWORK AND WEB DATA TECHNOLOGIES

Description

Minimum Credits: 3

Maximum Credits: 3

Covers core technologies and standards for distributed systems, especially web based distributed systems. Includes an overview of the standardization process and the standards organizations. Looks at network and data standards with significant attention to HTMl,XML, HTTP, URL and other web technologies including APIS to programming with them.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PROG: School of Information Science or Sch Computing and Information; PLAN: Excluded Plans = Library & Information Science (MLIS, PHD, CERT-Advanced)

1. INFSCI 2591 ALGORITHM DESIGN

Description

Minimum Credits: 3

Maximum Credits: 3

Fundamentals of algorithm design including greedy algorithms, divide-and-conquer algorithms, dynamic programming, heuristics and approximate algorithms, parallel and distributed algorithms, multi-dimensional data structures, time complexity of algorithms, and development of programs from algorithms.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PREQ: INFSCI 2500 or INFSCI 2500 Exemption (Test Score=1); PROG: School of Information Science or Sch Computing and Information

1. INFSCI 2595 MACHINE LEARNING

Description

Minimum Credits: 3

Maximum Credits: 3

Introduction to machine learning, includes algorithms of supervised and unsupervised machine learning techniques, designing a machine learning system, bias-variance tradeoffs, evaluation metrics; Parametric and non-parametric algorithms for regression and classification, k-nearest-neighbor estimation, decision trees, discriminant analysis, neural networks, deep learning, kernels, support vector machines, ensemble methods, regularization techniques; Dimensionality reduction, principle component analysis, LDA, t-SNE; Clustering methods such as k-means, hierarchical clustering, spectral clustering, DBSCAN; Mathematical foundations including linear algebra, probability theory, statistical tests, statistical learning theory; Best practices and application to real-world problems.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

1. INFSCI 2620 DEVELOPING SECURE SYSTEMS

Description

Minimum Credits: 3

Maximum Credits: 3

Design and implementation of secure systems. Principles and practice of trustworthy computing, secure and high assurance software development process and lifecycle models. Secure software design using UMLSEC, secure design of operating systems and network services, database and applications. Secure webs services, cots-based and service-oriented systems. Software assurance tools and techniques such as code analysis and testing, evaluation and certification of software. Secure programming techniques.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PREQ: INFSCI 2150 or TELCOM 2810; PROG: School of Information Science or Sch Computing and Information

1. INFSCI 2621 SECURITY MANAGEMENT AND COMPUTER FORENSICS

Description

Minimum Credits: 3

Maximum Credits: 3

Administration and management of security of enterprise information systems and networks. Principles and tools related to intrusion detection systems, vulnerability analysis, anomaly detection, computer forensics, application logging, auditing and data management, risk management, contingency planning and incident handling, digital immune systems, and alarms and responses. Security standards, evaluation and certification process; security planning, ethical and legal issues in information; privacy, traceability and cyber-evidence.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PREQ: (INFSCI 2150 or TELCOM 2810) and TELCOM 2821; PLAN: ISCI-MSI, ISCI-AC, BDA-ACG, BDAL-ACG, SAISSYS-ACG, SAIS-ACG, ISCI-PHD, INFSCI-MSI, INFSCI-AC, INFSCI-PHD

1. INFSCI 2625 CYBERSECURITY AND PRIVACY REGULATION

Description

Minimum Credits: 3

Maximum Credits: 3

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad Letter Grade

1. INFSCI 2629 CAPSTONE IN SECURITY

Description

Minimum Credits: 3

Maximum Credits: 3

Integrative class for master's students in their final semester of the sais track. Combination of business and technical case studies and group projects. Case studies focus on business/economics aspects of providing information assurance and how this service impacts technology. Group projects involve design and development of a prototype secure and survivable information system including application development, system deployment, system optimization and system economics.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PREQ: (INFSCI 2150 or TELCOM 2810) and TELCOM 2821; PLAN: ISCI-MSI, ISCI-AC, BDA-ACG, BDAL-ACG, SAISSYS-ACG, SAIS-ACG, ISCI-PHD, INFSCI-MSI, INFSCI-AC, INFSCI-PHD

1. INFSCI 2710 DATABASE MANAGEMENT

Description

Minimum Credits: 3

Maximum Credits: 3

Basic graduate course on database systems. Centralized relational database systems with emphasis on database design, implementation, and administration. Comprehensive coverage of SQL, data modeling, normalization, storage management, transaction management, and query evaluation. Students will develop practical skills in building and maintaining realistic medium-scale database systems. Also covers more advanced topics including data warehousing and OLAP.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: CREQ: INFSCI 2500orINFSCI 2500 Exemption(Test Score=1);PLAN:IIS-MS orINFSCI-AC or INFSCI-MSI orINFSCI-PHD or IISCI-MS or ISCI-AC or ISCI-MSI or ISCI-PHD or SAISYS-AC or SAISYS-ACG or TCOMM-MST or TCOMM-AC)or(SUBPLAN:MLISDL-TR or MLISDLI-SP or MLIDLIM-SP)

1. INFSCI 2711 ADVANCED TOPICS IN DATABASE MANAGEMENT

Description

Minimum Credits: 3

Maximum Credits: 3

Advanced graduate course on database systems. Key issues that typically arise in the context of large-scale enterprise database management in heterogeneous wide-area environments including distributed and non-relational database systems, networK-centric data management, web-based information systems, heterogeneous databases, information integration, and wireless data management.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PREQ: INFSCI 2710; PLAN ISCI-MSI, ISCI-AC, BDA-ACG, BDAL-ACG, SAISSYS-ACG, SAIS-ACG, ISCI-PHD, INFSCI-MSI, INFSCI-AC, INFSCI-PHD

1. INFSCI 2725 DATA ANALYTICS

Description

Minimum Credits: 3

Maximum Credits: 3

Introduction to fundamental technologies underlying distributed storage and efficient analysis of very large amounts of data. An overview of approaches to extracting information and knowledge from data, verification, testing, and presentation of results.

Academic Career: Graduate

Course Component: Lecture

Grade Component: LG/SNC Elective Basis

1. INFSCI 2730 E-BUSINESS

Description

Minimum Credits: 3

Maximum Credits: 3

Conceptualization of e-business in the context of markets, business practices, and information theory. Implementation of e-business websites and services via various programming languages. Examines various models for online consumer systems, business-to-business systems, and enterprise computing--e.g., Supply chain models. Covers related technologies in document processing, telecommunications, and security.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PREQ: INFSCI 2560 and 2710; PROG: School of Information Science or Sch Computing and Information

1. INFSCI 2731 SECURITY IN E-COMMERCE

Description

Minimum Credits: 3

Maximum Credits: 3

Covers the technology, concepts, issues and principles that are important in the design and implementation of secure e-commerce systems. Examines technology for protecting electronic commerce. It will include discussion of basic security principles, as well as the issues, policy and standards particular to e-commerce applications.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PREQ: INFSCI 2560; CREQ: (INFSCI 2150 or TELCOM 2810); PROG: School of Information Science or Sch Computing and Information

1. INFSCI 2739 WEB SERVICES AND DISTRIBUTED COMPUTING

Description

Minimum Credits: 3

Maximum Credits: 3

Looks at advanced techniques to client server computing. Covers design techniques necessary for organizing very large web sites. Integrates the knowledge and skills from e-business and web technologies to develop a functioning distributed application using web services, RMI, RSS, AJAX, etc.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PREQ: INFSCI 2550 and 2730; PROG: School of Information Science

1. INFSCI 2750 CLOUD COMPUTING

Description

Minimum Credits: 3

Maximum Credits: 3

This course provides an overview of the concepts and design principles behind existing cloud solutions. Topics include large scale data processing techniques such as mapreduce/hadoop and its related ecosystem, overview of virtualized commercial cloud models, system virtualization, hypervisors and virtualized platforms. Design of cloud storage systems such as key-value stores and geographically distributed storage systems. Introduction to security and privacy issues in cloud computing, issues of data and execution privacy in modern commercial cloud services.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PREQ: (INFSCI 2500 or INFSCI 2500 Exemption (Test Score=1)); PLAN: School of Information Sciences

1. INFSCI 2780 INTERACTIVE GRAPHICS

Description

Minimum Credits: 3

Maximum Credits: 3

Computer graphics, point plotting techniques, line drawing display, clipping and windowing, display lines, geometric models, picture structure, graphic input devices and techniques, event handling, raster graphics, solid area scan conversion, three-dimensional graphics, shading, and user-interface design related to the associated behavioral factors in INFSCI 2300 and INFSCI 2350.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PREQ: INFSCI 2500 or INFSCI 2500 Exemption (Test Score=1); PROG: School of Information Science

1. INFSCI 2801 GEOSPATIAL INFORMATION SYSTEMS (GIS)

Description

Minimum Credits: 3

Maximum Credits: 3

Introduction to the fundamentals of GIS. Topics include GIS components, geospatial data structures, geospatial databases, geospatial data integration and conversion, overlay analysis, proximity analysis, network analysis, buffering, topology, and GIS tools (hardware and software).

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PROG: School of Information Science or Sch Computing and Information; PLAN: Excluded Plans = Library & Information Science (MLIS, PHD, CERT-Advanced)

1. INFSCI 2802 LOCATION-BASED SERVICES

Description

Minimum Credits: 3

Maximum Credits: 3

Internet GIS, distributed geo-processing on the internet, mobile GIS, location-based services, navigation systems and services, social networking, and a selection of emerging applications possible through mobile GIS and location-based services.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad Letter Grade

Course Requirements: PROG: School of Information Science or Sch Computing and Information

1. INFSCI 2809 SPATIAL DATA ANALYTICS

Description

Minimum Credits: 3

Maximum Credits: 3

Geospatial data collection, geospatial data structures and indexing, geospatial analysis, data quality, geospatial data structures and algorithms for surfaces, spatiotemporal databases, and digital terrain modeling.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad Letter Grade

Course Requirements: PROG: School of Information Science or Sch Computing and Information

1. INFSCI 2821 FOUNDATIONS OF CLINICAL AND PUBLIC HEALTH INFORMATICS

Description

Minimum Credits: 3

Maximum Credits: 3

A survey of fundamental concepts and activities on information technology applied to health care. Topics include computer-based medical records, knowledge-based systems, telehealth, decision theory and decision support, human-computer interfaces, systems integration, the digital library, bioinformatics, and educational applications. Department-specific applications such as pathology, radiology, psychiatry and intensive care are also discussed.

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad Letter Grade

Course Requirements: PROG: School of Information Science or Sch Computing and Information

1. INFSCI 2910 INDEPENDENT STUDY: FOUNDATIONS

Description

Minimum Credits: 1

Maximum Credits: 3

Academic Career: Graduate

Course Component: Independent Study

Grade Component: Grad LG/SNC Basis

1. INFSCI 2915 SPECIAL TOPICS: FOUNDATIONS

Description

Minimum Credits: 3

Maximum Credits: 3

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

Course Requirements: PROG: School of Information Science or Sch Computing and Information; PLAN: Excluded Plans = Library & Information Science (MLIS, PHD, CERT-Advanced)

1. INFSCI 2930 INDEPENDENT STUDY: COGNITIVE

Description

Minimum Credits: 1

Maximum Credits: 3

Academic Career: Graduate

Course Component: Independent Study

Grade Component: Grad LG/SNC Basis

1. INFSCI 2935 SPECIAL TOPICS: COGNITIVE

Description

Minimum Credits: 3

Maximum Credits: 3

An independent study intended to cover advanced material outside of or beyond the scope of current course offerings, specifically within the Cognitive Science or Cognitive Systems academic area.

Academic Career: Graduate

Course Component: Independent Study

Grade Component: Grad LG/SNC Basis

Course Requirements: PROG: School of Information Science or Sch Computing and Information; PLAN: Excluded Plans = Library & Information Science (MLIS, PHD, CERT-Advanced)

1. INFSCI 2950 INDEPENDENT STUDY: SYSTEMS

Description

Minimum Credits: 1

Maximum Credits: 3

Academic Career: Graduate

Course Component: Independent Study

Grade Component: Grad LG/SNC Basis

1. INFSCI 2955 SPECIAL TOPICS: SYSTEMS

Description

Minimum Credits: 3

Maximum Credits: 3

Academic Career: Graduate

Course Component: Lecture

Grade Component: Grad LG/SNC Basis

1. INFSCI 2960 STUDY ABROAD

Description

Minimum Credits: 1

Maximum Credits: 15

Academic Career: Graduate

Course Component: Independent Study

Grade Component: Grad SN Basis

1. INFSCI 2965 SEMINARS: SPECIAL TOPICS

Description

Minimum Credits: 3

Maximum Credits: 3

Analysis of journal articles, books, and conference proceedings involving issues in information science. Techniques for preparing for the preliminary and comprehensive examinations.

Academic Career: Graduate

Course Component: Seminar

Grade Component: Grad LG/SNC Basis

1. INFSCI 2970 INDEPENDENT STUDY

Description

Minimum Credits: 1

Maximum Credits: 3

Independent studies are intended to cover advanced material outside of or beyond the scope of current course offerings.

Academic Career: Graduate

Course Component: Independent Study

Grade Component: Grad LG/SNC Basis

1. INFSCI 2980 PRACTICUM

Minimum Credits: 3

Maximum Credits: 6

For students who desire experience in applying the knowledge and skills acquired in their course work and laboratory sessions. Students are responsible for arranging a practicum with a business or organization.

Academic Career: Graduate

Course Component: Directed Studies

Grade Component: Grad LG/SNC Basis

1. INFSCI 2982 INFORMATION SCIENCE COOPERATIVE PROGRAM

Description

Minimum Credits: 1

Maximum Credits: 1

Academic Career: Graduate

Course Component: Independent Study

Grade Component: Grad HSU Basis

1. INFSCI 2995 THESIS

Description

Minimum Credits: 3

Maximum Credits: 3

The thesis is a report of original, theoretical, or laboratory work suitable for publication.

Academic Career: Graduate

Course Component: Directed Studies

Grade Component: Grad LG/SNC Basis

1. INFSCI 3005 INTRODUCTION TO THE DOCTORAL PROGRAM

Description

Minimum Credits: 3

Maximum Credits: 3

An introduction to the purpose and nature of doctoral studies in information science, theories and processes in scholarly research and the current state of research in the discipline. Graduate faculty in the program will present and discuss their current interests with students.

Academic Career: Graduate

Course Component: Seminar

Grade Component: Grad LG/SNC Basis

1. INFSCI 3150 SEMINARS: SPECIAL TOPICS

Description

Minimum Credits: 3

Maximum Credits: 3

Analysis of journal articles, books, and conference proceedings involving issues in information science. Techniques for preparing for the preliminary and comprehensive examinations.

Academic Career: Graduate

Course Component: Seminar

Grade Component: Grad LG/SNC Basis

Course Requirements: Plan: Information Science (PhD)

1. INFSCI 3250 RESEARCH SEMINAR

Description

Minimum Credits: 3

Maximum Credits: 3

Academic Career: Graduate

Course Component: Seminar

Grade Component: Grad LG/SNC Basis

1. INFSCI 3350 DOCTORAL SEMINAR

Description

Minimum Credits: 3

Maximum Credits: 3

Academic Career: Graduate

Course Component: Seminar

Grade Component: Grad LG/SNC Basis

Course Requirements: Plan: PhD students in Information Sciences, Library & Information Science, or Intelligent Systems

1. INFSCI 3990 DISSERTATION

Description

Minimum Credits: 1

Maximum Credits: 12

Academic Career: Graduate

Course Component: Thesis Research

Grade Component: Grad SN Basis

Course Requirements: PLAN: Information Science (PHD); CUM GPA: 3.25