

## Contents

# The College of Information Science and Technology

## Undergraduate Course Descriptions

### **INFO 101 - Introduction to Information Technology**

A survey course in information systems and issues associated with their use. Provides a broad-based introduction to computer hardware, software, telecommunications and information.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

### **INFO 102 - Introduction to Information Systems**

Introduces students to major types of organizational information systems and their development and use.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

May not be enrolled in one of the following College(s)/School(s):

### **INFO 105 - Information Organization, Evaluation and Use**

Introduction to the users of information systems and the information resources that can be accessed through these systems. Users are considered in terms of their information needs, communication and information seeking behavior, and information processing capabilities. Print and electronic information resources are considered in terms of both their content and structure.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

May not be enrolled in one of the following College(s)/School(s):

### **INFO 108 - Foundations of Software**

Provides students with fundamental concepts for designing, coding, testing, and deploying software systems. Examines software development activities from the perspective of various relevant disciplines including information systems, software engineering, digital media, and computer science. Introduces programming concepts and activities by demonstration, example and exercise.

Credits: 4.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

### **INFO 110 - Human-Computer Interaction I**

This course introduces the student to the study of computer-based user interfaces. It presents a user-interface layout and design, types and usage of interaction techniques, building a consistent look and feel throughout the interface and how to evaluate designs with users. Centered focus in evaluation of computer interfaces. It teaches the basic principles of user analysis and interface evaluation and gives a practical introduction to ergonomics.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

Must be enrolled in one of the following Major(s):

Digital Media

Information Systems

Information Technology

### **INFO 120 - IST Sem. for Transfer Students**

Introduces students to academic and co-curricular aspects of university life. Includes academic functions such as writing, reading, and studying skills and co-curricular functions such as campus resources, activities, and social programs. Aids in the transition to student life and is designed to help each student achieve academic and personal success.

Credits: 2.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

### **INFO 140 - Information Systems Lab I**

Provides hands-on experience with a variety of software products basic to current information systems. Covers products that support personal productivity in organizing, analyzing and presenting information. Addresses both local processing on personal computers and creation and use of information on the Internet.

Credits: 1.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

Pre-Requisites: INFO 101 Minimum Grade: D or ISYS 101 Minimum

Grade: D

### **INFO 151 - IS Software I: User Needs**

Prepares student to develop software to meet information needs of people and organizations. Covers appropriate use of programming

constructs and techniques. Focuses on creating simple programs to solve problems defines by user requirements specifications.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

Pre-Requisites: INFO 108 Minimum Grade: D

### **INFO 152 - IS Software II: Connections**

Introduces students to common elements of larger software applications including Web interfaces and database systems. Expands student knowledge of program design and organization. Introduces students to software development in teams.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

Pre-Requisites: INFO 151 Minimum Grade: D

### **INFO 153 - IS Software III: Construction**

Introduces concepts of software construction beyond writing simple code to prepare students to deal successfully with larger programs. Addresses issues of design at the routine and module level. Discusses issues relate to data organization and definition, control flow, layout and style, and documentation.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

Pre-Requisites: INFO 152 Minimum Grade: D

### **INFO 154 - IS Software IV: Challenges**

Introduces students to the problems of developing commercial software application including problems of scale, complexity, and change. Extends student ability to design and develop medium size programs. Provides experiences with larger, more complex systems, and system changes. Emphasizes team based development experiences.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

Pre-Requisites: INFO 153 Minimum Grade: D

### **INFO 200 - Systems Analysis I**

Study of the principles, practices and tools of information systems analysis and design. Emphasis on learning pragmatic aspects of working as a systems analyst and employing the tools of systems analysis and design.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

Pre-Requisites: INFO 102 Minimum Grade: D or ISYS 102 Minimum Grade: D

### **INFO 205 - Strategic Uses of Info Systems**

Familiarizes students with basic business problems and operations and provides an understanding of how information systems can be used to benefit organizations. Also introduces students to the pitfalls of developing and implementing information systems in organizations and helps students improve critical thinking skills. This is a writing intensive course.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

May not have the following Classification(s):

Freshman

Pre-Requisites: INFO 102 Minimum Grade: D or ISYS 102 Minimum Grade: D

### **INFO 210 - Database Management Systems**

Focuses on how to design databases for given problems, and how to use database systems effectively. Topics include database design techniques using the entity-relationship approach, techniques of translating the entity-relationship diagram into a relational schema, relational algebra, commercial query languages, and normalization techniques.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

May not be enrolled in one of the following College(s)/School(s):

Pre-Requisites: INFO 200 Minimum Grade: D or SE 210 Minimum Grade: D or ISYS 200 Minimum Grade: D

### **INFO 215 - Soc Aspects Of Info Systems**

Introduces social issues involved in information systems design and use, e.g., personal computing, telecommuting, computers in education, the privacy and security of stored and transmitted information, and information ownership. Explores the interaction of high technology, employment, and class structure.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

May not be enrolled in one of the following College(s)/School(s):

### **INFO 300 - Information Retrieval Systems**

The theoretical underpinnings of information retrieval are covered to give the student a solid base for further work with retrieval systems.

Emphasis is given to the process of textual information for machine indexing and retrieval. Aspects of information retrieval covered include document description, query formulation, retrieval algorithms, query matching, and system evaluation.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

May not be enrolled in one of the following College(s)/School(s):

Pre-Requisites: (INFO 105 Minimum Grade: D or ISYS 105 Minimum Grade: D ) and (INFO 110 Minimum Grade: D or ISYS 110 Minimum Grade: D ) and (CS 260 Minimum Grade: D or CS 133 Minimum Grade: D or INFO 154 Minimum Grade: D or SE 103 Minimum Grade: D )

### **INFO 310 - Human-Computer Interaction II**

Introduces the student to interactive computer system design. Teaches some of the basic approaches to task analysis, design, and evaluation of interactive computer systems. Applies these design principles in the development of the interface to an interactive computer system.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

May not be enrolled in one of the following College(s)/School(s):

Pre-Requisites: (INFO 110 Minimum Grade: D and INFO 200 Minimum Grade: D ) or SE 210 Minimum Grade: D

### **INFO 320 - Server Technology I**

Addresses information systems that have server-based architectures. Introduces students to basic concepts of servers and server-based architectures. Discusses dependence on features and capabilities of the underlying operating system. Reviews concepts of operating system, their architectures, and services. Discusses the client-server and various client-server architectures.

Credits: 4.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

May not have the following Classification(s):

Freshman

Pre-Requisites: (INFO 101 Minimum Grade: D or ISYS 101 Minimum Grade: D ) and (CS 131 Minimum Grade: D or CS 171 Minimum Grade: D or SE 101 Minimum Grade: D or INFO 151 Minimum Grade: D )

### **INFO 321 - Server Technology II**

Presents details of specific server platforms used to provide services to information systems applications. Prepares students to apply server technologies to information systems problems.

Credits: 4.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

May not have the following Classification(s):

Freshman

Pre-Requisites: INFO 320 Minimum Grade: D and (CS 133 Minimum Grade: D or CS 260 Minimum Grade: D or SE 103 Minimum Grade: D or INFO 154 Minimum Grade: D )

### **INFO 322 - Server Technology III**

Continues the study of server platform technologies for information systems applications. Prepares students to apply a wide range of server technologies to information systems problems.

Credits: 4.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

Pre-Requisites: INFO 321 Minimum Grade: D

### **INFO 330 - Computer Networking Tech I**

Presents the fundamentals of data communications and networking technologies. Focuses on the broad foundational coverage of key technologies and key concepts in network planning, design, and management. Major topics include network models, data and voice communications, local-area and wide-area technologies, IP networks and their applications and internetworking emphasizing the Internet.

Credits: 4.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

May not have the following Classification(s):

Freshman

Pre-Requisites: CS 133 Minimum Grade: D or CS 260 Minimum Grade: D or SE 103 Minimum Grade: D or INFO 154 Minimum Grade: D

### **INFO 331 - Computer Networking Tech II**

Focuses on design, construction and use of modern networks and internetworks. Prepares students to successfully create and operate modern secure networks. Major topics include LAN design and construction, internetwork architecture, WAN connectivity, security, virtual private networks and network operation in real-world environments.

Credits: 4.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

Pre-Requisites: INFO 330 Minimum Grade: D or ISYS 350 Minimum Grade: D

### **INFO 336 - Distributed Systems Security**

Study of the principles, practices, and techniques to secure distributed applications, information and the infrastructure of distributed information systems. Topics include security planning, policies and models, threats and attacks, and the use and integration of distributed system security mechanisms for confidentiality, authentication, access control, and intrusion detection.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

Pre-Requisites: INFO 330 Minimum Grade: D

### **INFO 340 - Prog Internet Info Sys I**

This is a hands-on course on programming Internet information systems with an object-oriented programming language, currently Java. The course emphasizes programming practice. It covers fundamental concepts such as object-oriented programming, client-server programming, multi-threaded programming, graphical user interface design, and application development.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

May not be enrolled in one of the following College(s)/School(s):

Pre-Requisites: (INFO 355 Minimum Grade: D or ISYS 355 Minimum Grade: D ) and (CS 260 Minimum Grade: D or CS 133 Minimum Grade: D or INFO 154 Minimum Grade: D or SE 103 Minimum Grade: D )

### **INFO 341 - Prog Internet Info Sys II**

Continues to develop design and programming skills for the development of Internet information systems. Studies and compares various web servers, applications servers, and different server-side programming languages. Emphasizes issues related to object-oriented design and server-side programming.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

May not be enrolled in one of the following College(s)/School(s):

Pre-Requisites: INFO 340 Minimum Grade: D or ISYS 340 Minimum Grade: D

### **INFO 355 - Systems Analysis II**

A project-oriented course that discusses software engineering and advanced techniques of requirements modeling, prototyping and software design, particularly utilizing object-oriented techniques. The course builds upon Systems Analysis I, requiring students to apply their knowledge of systems analysis tools and techniques.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

May not be enrolled in one of the following College(s)/School(s):

Pre-Requisites: INFO 210 Minimum Grade: D or ISYS 210 Minimum Grade: D

### **INFO 360 - Language Processing**

Study of the problems and techniques of processing natural language. Introduces theory of spoken language and how it differs from theories of computer-generated natural language. Includes language pattern recognition and syntactic inference, and semantic networks.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

May not be enrolled in one of the following College(s)/School(s):

Pre-Requisites: INFO 210 Minimum Grade: D or ISYS 210 Minimum Grade: D

### **INFO 365 - Database Administration I**

Database Administration is a continuation of Database Management Systems, and includes the following: advanced ERD techniques, database management system internals and advanced elements of the SQL language, as well as stored procedures and triggers, specifically as demonstrated in the Oracle implementation.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

May not be enrolled in one of the following College(s)/School(s):

Pre-Requisites: (INFO 210 Minimum Grade: D or ISYS 210 Minimum Grade: D ) and (CS 133 Minimum Grade: D or CS 260 Minimum Grade: D or INFO 154 Minimum Grade: D or SE 103 Minimum Grade: D )

### **INFO 366 - Database Administration II**

Introduces the principles and practices of database administration, particularly as they apply to commercial-grade relational database management systems. The course will include, but not be limited to, installation, systems tuning, application tuning, security, user management, backup and recovery. To this end, internals of RDBMSs will be discussed, using major commercial RDBMSs as examples. Distributed database issues will also be discussed. As time permits, other advanced issues will be addressed, such as issues of object and object-relational databases.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

May not be enrolled in one of the following College(s)/School(s):

Pre-Requisites: (INFO 350 Minimum Grade: D or ISYS 350 Minimum Grade: D or INFO 330 Minimum Grade: D ) and (INFO 365 Minimum Grade: D or ISYS 365 Minimum Grade: D )

### **INFO 370 - Artificial Intel Info Sys**

Introduction to the field of artificial intelligence (AI). Basic concepts, principles, and techniques used to achieve the goals of AI are studied. Examples and applications are specific to information systems.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):  
Undergraduate Quarter  
Pre-Requisites: (CS 133 Minimum Grade: D or CS 260 Minimum Grade: D or INFO 154 Minimum Grade: D or SE 103 Minimum Grade: D ) and PHIL 111 Minimum Grade: D

### **INFO 373 - Digital Forensics**

Provides an introduction to the collection, analysis, presentation, and preservation of digital evidence according to methodologies defined by forensic science to fulfill the needs of the legal and law enforcement communities. Introduces systems understanding as an important tool for digital forensic investigation of crimes that use information technology.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

Pre-Requisites: INFO 210 Minimum Grade: D and INFO 355 Minimum Grade: D

### **INFO 375 - Introduction to Information Systems Assurance**

Introduction to the problem of security for modern information systems. Provides an overview of threats, both human and computer, to the security of an organization's data and information resources. Explores how systems may be made less vulnerable and how to respond. Examines issues of personal security in an electronic world.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

Pre-Requisites: (INFO 350 Minimum Grade: D or INFO 330 Minimum Grade: D ) and INFO 365 Minimum Grade: D

### **INFO 399 - Independent Study**

Requires approval of advisor, supervising faculty member and college. BSIS majors may take a maximum of 6 credits of independent study. Any exception to this maximum must be approved in advance by the student's advisor. Independent study on a topic selected by the student. Independent study is supervised by a faculty member and guided by a plan of study developed by the student in a term prior to the term in which the independent study is pursued.

Credits: 2.00 to 12.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

### **INFO 405 - Comptr-Supptd Coop Work**

Human and technical issues and concepts of computer-supported cooperative work (CSCW). Topics include the ways that groups work in the networked organization, analysis and design of workflow systems, the technological underpinnings of selected groupware technologies, and the design and implementation of groupware technologies.

Credits: 3.00

College: Information Sci & Technology  
Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

May not be enrolled in one of the following College(s)/School(s):

Pre-Requisites: (INFO 110 Minimum Grade: D or ISYS 110 Minimum Grade: D ) and (INFO 200 Minimum Grade: D or ISYS 200 Minimum Grade: D ) and (INFO 350 Minimum Grade: D or ISYS 350 Minimum Grade: D or INFO 330 Minimum Grade: D )

### **INFO 410 - Information Technology Infrastructure**

Presents methods for evaluating and selecting information technologies and planning technology implementation. Emphasizes consideration of needs and issues of the organization and individuals served by the technology. Also addresses issues in management of technology after initial installation including service planning, maintenance, and evolution.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

May not be enrolled in one of the following College(s)/School(s):

May not have the following Classification(s):

Freshman

Sophomore

### **INFO 415 - IT Services**

Introduces issues in management and delivery of IT services. Addresses needs and approaches to operational support including providing services, help desks, online support, documentation, and user training. Examines approached to defining, measuring, and analyzing service and support quality.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

May not be enrolled in one of the following College(s)/School(s):

May not have the following Classification(s):

Freshman

Sophomore

### **INFO 420 - Software Project Management**

The objective of this course is to study project management in the context of software systems development. The course will cover the processes, contexts, metrics, planning and management concerns of managing projects for modern software systems. This is a writing intensive course.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

Must have the following Classification(s):

Junior  
Senior

Pre-Requisites: (INFO 200 Minimum Grade: D or ISYS 200 Minimum Grade: D ) and (CS 133 Minimum Grade: D or CS 260 Minimum Grade: D or INFO 154 Minimum Grade: D or SE 103 Minimum Grade: D )

#### **INFO 424 - Team Project Practicum**

Provides hands-on experience with software systems development in a controlled environment. Student work in small teams to create a software product selected by the instructor. Activities include requirements specification, test specification, design, and software construction. Allows students to develop an integrated understanding of software life-cycle phases.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

Pre-Requisites: INFO 355 Minimum Grade: D

#### **INFO 425 - Design Problem I**

This course is an independent project in which student teams design and implement information systems under faculty guidance. Possible projects include (but are not limited to) information technology areas such as databases, web-based systems, collaborative systems, user interfaces, and expert systems. This is a writing intensive course.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must have the following Classification(s):

Senior

Pre-Requisites: ISYS 420 Minimum Grade: D or INFO 420 Minimum Grade: D or INFO 420 Minimum Grade: D

#### **INFO 426 - Design Problem II**

This course is a continuation of INFO 425. This is a writing intensive course.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must have the following Classification(s):

Senior

Pre-Requisites: INFO 425 Minimum Grade: D

#### **INFO 435 - Information Services**

Examines electronic services that deliver "published" information to an organization from external sources. Relates these services to functions such as planning, marketing, and research. Shows ways of monitoring the organization's larger environments, such as the economy, government, competitors, and new technologies. This course introduces students to the core concepts of information services as they apply to the essential techniques for retrieving, analyzing, organizing and presenting information. The skills learned in this course are transferable to any information seeking activity whether it is in a large research and development lab, or a small start-up company. The overall goal of this course is that upon completion, each student can

produce a systematic and accurate method for recovering, analyzing, and disseminating needed information in any setting.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

Must have the following Classification(s):

Junior

Senior

Pre-Requisites: INFO 105 Minimum Grade: D or ISYS 105 Minimum Grade: D

#### **INFO 450 - Expert Consultant Systems**

Introduces the basic concepts, techniques, and tools involved in the development of information systems based on human expertise. The course discusses the identification of expert system projects, knowledge acquisition, architectures of expert systems, inference, database and procedural considerations, verification and validation of expert systems. Provides hands-on experience in developing expert systems using an expert system programming language.

Credits: 3.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter

Pre-Requisites: INFO 370 Minimum Grade: D or ISYS 370 Minimum Grade: D

#### **INFO 480 - Special Topics in Info Systems**

Selected topics of interest to students in information systems. May be repeated for credit if topic varies.

Credits: 4.00

College: Information Sci & Technology

Department: College of Info Science & Tech

Restrictions:

Must be enrolled in one of the following Program Level(s):

Undergraduate Quarter