

# INFO - INFO MGMT SYSTEMS (INFO)

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## **INFO U101 Survey of Information Technology 3 Credit Hours**

Use of information technology to collect, analyze, and transform data into knowledge using desktop software and commonly available Internet-based resources and the evaluation of information sources for accuracy, suitability, safety, security, societal and ethical issues.

## **INFO U102 Introduction to Digital Safety 3 Credit Hours**

Approaches to identifying exposure threats against personal information as a means to establishing end-user best practices. Topics include digital reliance impact on culture, system exploitation at the hardware, operational, and application level; ethical concerns related to hacking and application use.

## **INFO U139 Introduction to Object-Oriented Applications 3 Credit Hours**

Object-oriented problem-solving tools, techniques, and solution structures for desktop-oriented, user-layer environments, a survey of third-generation programming languages (3GL), introduction to the object-oriented paradigm.

Prerequisite(s): INFO U101 or INFO U102 or CSCI U138 or consent of instructor.

## **INFO U201 Concepts of Information Management and Systems 3 Credit Hours**

Theoretical foundations of organization of information; cognitive structures and processing of data, information, knowledge, and understanding information uses and users. The integrated and interdisciplinary nature of information science and computer science is introduced and developed through case studies and examples from concentration disciplines: business, education, communication, and healthcare settings.

Prerequisite(s): INFO U101 or CSCI U138 or CSCI U150.

## **INFO U211 Microcomputer Organization 3 Credit Hours**

Introduction to the major features of operating system software, the primary functions of CPU's, bus architectures, secondary storage devices, peripheral devices, hardware and software configuration. The goal is the assembly and disassembly of microcomputer systems and installation of operating systems, network operating systems, and applications software.

Prerequisite(s): INFO U101 or CSCI U138 or CSCI U150.

## **INFO U303 Organizational Informatics and IT Platforms 3 Credit Hours**

Needs, uses and consequences of information in organizational contexts, information technology platforms, architectures and infrastructures, functional areas and processes, information-based products and services, the use of and redefining role of information technology, sociotechnical structures, and the rise and transformation of information-based industries.

Prerequisite(s): INFO U201 or consent of instructor.

## **INFO U305 Social Informatics 3 Credit Hours**

Key social research and perspectives on the use of information and communication technologies, information ethics, relevant legal frameworks, popular and controversial uses of technology, digital divides, and multicultural issues of information management.

Prerequisite(s): INFO U303 or equivalent; or consent of instructor.

## **INFO U307 Systematic Innovation 3 Credit Hours**

Methodologies, tools, skills, and knowledgebase supporting a repeatable, structured, and disciplined approach to innovative problem solving, brainstorming, and alternative thinking included, but not limited to: useful/harmful feature analysis, problem formulator diagramming, selection and application of innovation operators, and the innovation situation questionnaire.

Prerequisite(s): 24 credit hours or consent of instructor.

## **INFO U315 Networking Technology 3 Credit Hours**

Basic concepts of computer networks, data telecommunication and distributed applications, including network topology, hardware, software protocol, security, and the implications of network technologies on the deployment and implementation of networked systems.

Prerequisite(s): INFO U303 or CSCI U300; or consent of instructor.

## **INFO U325 Fundamentals of Relational Database Management Systems 3 Credit Hours**

Basic architecture, structures, and query languages. Topics include design and implementation of RDBMS, relational data models, conceptual modeling, data independence, specification of data requirements, normalization, recovery and security.

Prerequisite(s): INFO U305 or CSCI U300; or consent of instructor.

## **INFO U345 Technical Presentation and Communication 3 Credit Hours**

The art of effective creation of formal oral and written communications in a professional environment using modern technology to assist in writing and presentation. Covered topics include using word processing software to ease the research process, evaluation of information sources, the proper use of visual aids such as PowerPoint, the creation of video presentations, effective speech writing, power-speaking methods and techniques, and methods of persuasive writing in the professional work.

Prerequisite(s): INFO U101 or CSCI U138 or CSCI U150.

## **INFO U346 Communication & New Technology 3 Credit Hours**

Understanding the components of various technologies and their importance in information management and dissemination within and outside the organization.

Prerequisite(s): INFO U101 or CSCI U138 or CSCI U150.

## **INFO U347 Web Page Construction 3 Credit Hours**

Design of user-layer Web pages using HTML, Java script, Flash, and Dreamweaver, featuring graphic preparation, layout and effective presentation of information.

Prerequisite(s): INFO U303 or INFO U305; or consent of instructor.

## **INFO U399 Independent Study Informatics 1-6 Credit Hours**

Directed and self-guided research into topics of interest in the field of informatics. May be repeated for a maximum of 6 credit hours.

Prerequisite(s): Consent of instructor.

## **INFO U415 E-Commerce & the Internet 3 Credit Hours**

Coordination and cultural challenges, value creation opportunities, and information management issues associated with various forms of electronic commerce including electronic data interchange, the World Wide Web, and the Internet in today's global economy.

Prerequisite(s): INFO U315 or consent of instructor.

**INFO U417 Information Privacy and Security 3 Credit Hours**

Issues information management as they relate to the International Information Systems Security Certification Consortium's 10 security domains. The role of the security domains in the context of design, implementation, and maintenance of systems to include the legal and ethical aspects of privacy and security. Case studies covering these roles are included.

Prerequisite(s): INFO U315 and INFO U325; or consent of instructor.

**INFO U421 Data Warehousing and Decision Support Systems Technology 3 Credit Hours**

Data warehousing, online analytical processing, and decision support systems. Topics include design and architectural issues, cost effectiveness, management concerns, data integrity, deployment, and maintenance issues.

Prerequisite(s): INFO U325 or consent of instructor.

**INFO U422 Knowledge-Based Systems 3 Credit Hours**

Knowledge representation, intelligent decision systems, principals of rule-based systems, action rules, interestingness measures, distributed query answering. Select study of actual systems and applications in specific domains such as: medicine, business, communications, and education.

Prerequisite(s): INFO U421 or consent of instructor.

**INFO U423 Human-Machine Interaction 3 Credit Hours**

Concepts of interaction and how people acquire, store and use data including interface analysis and creation, human factors in perception, pattern recognition, speech recognition, attention, memory and expectation.

Prerequisite(s): Senior standing or consent of instructor.

**INFO U424 Big Data 3 Credit Hours**

Infrastructure, management, analysis, applications, visualization, architectures, security, and privacy issues of large-volume, rapidly-changing, uncertain, unstructured data sources.

Prerequisite(s): INFO U325 or consent of instructor.

**INFO U425 Cloud Management 3 Credit Hours**

Fundamentals, management issues, and architectures of cloud-based implementations, concepts, models, enabling technologies, security, and cloud infrastructure.

Prerequisite(s): INFO U325 or consent of instructor.

**INFO U427 Cybersecurity Technology 3 Credit Hours**

Network and security foundation, data recovery techniques, network vulnerability assessments and technologies, cyber intelligence and internet governance, anticipating attacks, using monitoring tools, and developing defensive strategies.

Prerequisite(s): INFO U417 or HIMS U417 or consent of instructor.

**INFO U430 Intelligent Systems 3 Credit Hours**

Concepts, fundamentals, and history of artificial intelligence, cognitive systems, and human cognitive augmentation. Social, ethical, and commercial implications of the application of recent advancements in machine learning, natural language interfaces, and thinking machines will be discussed.

Prerequisite(s): Senior standing.

**INFO U440 Business Process Re-Engineering and Workflow 3 Credit Hours**

Information technology and communication requirements of, and cultural or social issues pertaining to, the flow of work through distributed information management processes in business and other organizations. Students taking the health informatics minor focus on applications in healthcare settings.

Prerequisite(s): INFO U415 and senior standing; or consent of instructor.

**INFO U441 IT Project Management 3 Credit Hours**

Breakdown, estimation, leadership of a diverse team, and the use of tools to ensure the completion of deliverables within budget and on schedule. Students taking the health informatics minor focus on applications in the healthcare settings.

Prerequisite(s): INFO U415 and senior standing; or consent of instructor.

**INFO U445 Computer Forensics 3 Credit Hours**

Recovery and analysis of digital evidence, legal and technical issues, and the use of modern forensics tools and techniques. Real-world case studies regarding security and investigative forensics processes are used.

Prerequisite(s): INFO U417 or HIMS U417 or consent of instructor.

**INFO U450 Executive IT Management 3 Credit Hours**

Issues and challenges facing IT executives including IT alignment and governance, consensus, executive leadership, oversight, return-on-investment analysis, project management, and risk management.

Students taking the health informatics minor focus on applications in the healthcare settings.

Prerequisite(s): Senior standing and INFO U345; or consent of instructor.

**INFO U496 Special Topics in Informatics 1-6 Credit Hours**

Current trends, events, software, hardware, and issues in informatics, information technology, and information management. May be repeated for a maximum of 6 credit hours.

Prerequisite(s): Senior standing and consent of instructor.

**INFO U498 Experiential Learning in Information Management and Systems 3 Credit Hours**

The application of learning in a professional setting. To complement and strengthen the Information Management and Systems academic program, students will complete a planned program of observation, study, and work in selected organizations with information management and systems offices. Student will have an opportunity to apply and articulate what they have learned in the classroom. Pass/Fail credit.

Prerequisite(s): IMS major, senior standing and consent of instructor.

**INFO U499 Senior Seminar in Information Management and Systems 3 Credit Hours**

Integration of knowledge in information management and systems. Students will study and evaluate current innovations in technology and current applications of these systems. Case studies involving information systems technology will be used. Students will research and present new trends in technology. Students will experience an intensive and practice exercise in scholarship production. Class discussion will foster effective and creative implementation of research strategies, writing abilities, documentation procedures, portfolio development, and presentational skills.

Prerequisite(s): Senior standing or consent of instructor.