Computer Information Systems (CINS)

Courses

CINS 5301 Information Resources Management: 3 semester hours.
Topics include information systems analysis, design, application, operation, management, and methods for integrating information resources into a decision support framework.

CINS 5304 Data Communications and Computer Networks: 3 semester hours.
A broad introduction to network technologies, architectures, services, and management necessary to meet business needs, including network and internet designs, applications, and an overview of the telecommunications industry.

CINS 5305 Database Management Systems: 3 semester hours.
Fundamentals of database management systems, techniques for the design of databases, and principles of database administration. The course emphasizes theories of data modeling, database design, database application development, and database management. Topics include conceptual models, query languages, and centralized, distributed, and client/server architectures. Special importance is assigned to the design of databases and the development of client/server architectures. Other topics include database integrity, security, error recovery, and concurrency control.
Prerequisites: COMP 1224 or COMP 1422.

CINS 5306 Data Structures and Algorithms: 3 semester hours.
Advanced course in data structures with an emphasis on common applications such as pattern matching, data compression, and spell checking. The goals are to provide an insight into data structures, to show how to evaluate data structures, and to provide a basis for making wise choices of data structures in the development of software application systems. The course relates the principles of data structures to the implementation of commercial applications and widely used utilities such as diff (for finding the string edit distance), grep (for pattern matching), and compress (for data compression).
Prerequisites: CINS 1224 or CINS 1422.

CINS 5307 Information Technology: 3 semester hours.
Introductory graduate-level course for CIS majors. This course explores the "information technology (IT) infrastructure," that is, the complex system of computers, networks, software, and delivery goals which collectively form the platform for assimilating and delivering information products and services to an organization and its customers, clients, and suppliers.

CINS 5317 Information Retrieval: 3 semester hours.
An introduction to information retrieval theory and algorithms. The topics include indexing, vector space models, evaluation, probabilistic and language models, web search engine, text classification, link analysis, XML retrieval, etc. with their implementation and applications.
Prerequisites: CINS 5306 or CINS 5063.

CINS 5318 Software Engineering: 3 semester hours.
Specifying software requirements and an overview of analysis and design techniques that can be used to structure applications. Topics in software requirements include interacting with end-users to determine needs and expectations, identifying functional requirements, and identifying performance requirements. Analysis techniques include prototyping, modeling, and simulation. Design topics include the system lifecycle, hardware and software trade-offs, subsystem subsystem definition and design, abstraction, information hiding, modularity, and reuse.
Prerequisites: CINS 5306 or CINS 5063.

CINS 5319 Enterprise Information Systems: 3 semester hours.
Introduce Business Processes used in common information systems such as Human Resources, Customer Relationship Management, Supply Chain Management, Enterprise Resource Planning, and Knowledge Management Systems. Students learn the development of modules using open source systems.
Prerequisites: CINS 5063 or CINS 5306 and (CINS 5033 or CINS 5305).

CINS 5330 E-Commerce: 3 semester hours.
The evolution of electronic commerce, where business is conducted between organizations and individuals relying primarily on digital media and transmission. Participants will investigate the opportunities and challenges of exchanging goods and services over communications networks as well as the manner in which business relationships are being reshaped. Course activities are designed to provide both managerial and entrepreneurial assessments of anticipated advances in information technology with respect to business systems and electronic markets.

CINS 5331 Information Assurance: 3 semester hours.
Topics include information security engineering, introduction to various information and Internet attack, defense technologies, operating system vulnerabilities and safeguards, and cryptography.
Prerequisites: (CINS 5304 or CINS 5043) and (CINS 5306 or CINS 5063).

CINS 5338 Software Project Management: 3 semester hours.
The course provides an in depth examination of software project management principles and activities. Methods for managing and optimizing software development process are discussed, along with techniques for managing software products from concept through development.
Prerequisites: CINS 5305 or CINS 5033 and (CINS 5306 and CINS 5063).

CINS 5391 Masters Project: 3 semester hours.
A candidate for the Master of Science in Computer Information Systems with project option is required to perform a study, design, or investigation, under the direction of a graduate faculty advisor. An oral presentation and a written report are required. Prerequisite: candidacy for the Non- Thesis-Option of the Master of Science in Computer Information Systems.

CINS 5398 Special Topics in Computer Information Systems: 3 semester hours.
A course design to expose new and emerging concepts and technologies.
Prerequisites: CINS 5306 or CINS 5063.

CINS 5690 Master Thesis: 6 semester hours.
A candidate for the Master of Science in Computer Information Systems with thesis option is required to perform a study, a design or investigation, under the direction of a faculty advisory committee. A written thesis is required to be presented, defended orally and submitted to the faculty advisory committee for approval.