Department of Information Systems

Information Systems

The Information Systems (IS) degree program combines knowledge of leading edge information technologies with an understanding of the ever changing needs of today’s dynamic business environment. As such, it attracts students who are interested in working with technology to find solutions to business problems. While a fundamental understanding of information technology is a cornerstone of the degree, an equally important and distinguishing element of the IS degree is a solid foundation in basic business functions. Students may major in IS without an area of emphasis or may select one of the following three emphasis areas.

Business Intelligence

The BI emphasis focuses on the use of information technology to identify trends and hidden patterns in an organization’s data and external environment, and then predicts how these trends and patterns will impact the organization’s activities and ultimate success. Students pursuing this emphasis will be prepared to assist companies in the identification and development of competitive strategies, as well as in the management of corporate knowledge. They will also receive an SAP America Certificate and be eligible for SAP’s TERP-10 Certification Program. Potential employers include a wide array of medium and large businesses across all types of industries.

Enterprise Resource Planning Systems

The ERP emphasis focuses on large, complex information systems that integrate business processes across an entire organization. Because the number of IS professionals with these skills is low, this is a high-demand area. Students pursuing this emphasis will be prepared to assist companies in the selection, implementation, and support of such systems. Potential employers include consulting companies, ERP developers, as well as thousands of companies that adopt or wish to adopt ERP systems.

Enterprise Security

The ES emphasis focuses on the development and administration of security policies as they pertain to the management of information systems. Students pursuing this emphasis will be prepared to assist companies in the design, implementation, and management of secure information systems and networks. In today’s security-conscious world, virtually every organization is a potential employer of students who pursue this option.

Information Systems Majors


Information Systems Interdisciplinary Minors


Information Systems Minors


CISM 1110 Computer Applications
1 Credit Hour. 0 Lecture Hours. 1 Lab Hour.
Provides lecture and detailed instruction in application software using word-processing, spreadsheets, database and presentation software.
Corequisite(s): CISM 1120.
Cross Listing(s): CISM 1110S.

CISM 1110S Computer Applications
1 Credit Hour. 0 Lecture Hours. 1 Lab Hour.
Provides lecture and detailed instruction in application software using word-processing, spreadsheets, database, and presentation software.
Corequisite(s): CISM 1120S.
Cross Listing(s): CISM 1110.

CISM 1120 Computer Concepts
2 Credit Hours. 2 Lecture Hours. 0 Lab Hours.
Provides an introduction of computer concepts and the evolution of computers in society. Lecture topics include computer system components, data representation & storage, software & multimedia, computer architecture, data communications & network configuration, data security & privacy, viruses, ethic, email, Internet, and the computer marketplace.
Corequisite(s): CISM 1110.
Cross Listing(s): CISM 1120S.

CISM 1120S Computer Concepts
2 Credit Hours. 2 Lecture Hours. 0 Lab Hours.
Provides an introduction of computer concepts and the evolution of computers in society. Lecture topics include computer system components, data representation and storage, software and multimedia, computer architecture, data communications and network configuration, data security and privacy, viruses, ethic, email, Internet, and the computer marketplace.
Corequisite(s): CISM 1110S.
Cross Listing(s): CISM 1120.

CISM 1130 Computers and Applications
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
CISM 1131 Computer Survival Skills
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
This course provides a survey and instruction in the use of modern systems and applications software routinely used in personal, academic, and organizational computing. The purpose of the course is to aid students in becoming familiar and proficient in using common software and Internet tools. The topics address a wide variety of software available to manage personal computers; create, format, edit, convert, acquire, distribute and manage various PC and Internet file types; use and manage Web-based communications like email, FTP, IM, Chat and Blogs; effectively and efficiently use the Internet to search, acquire, research and manage Web-based content, data, and information; use established informational Web-sites for research. Other topics include PC and Internet security and risks, and recent developments in technologies and software that affect the typical computer user. This course is not a substitute for either CISM 1110, CISM 1120, or CISM 2530.

CISM 2030 Introduction to Business Programming
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
This course provides an overview of fundamental Information Systems concepts and career opportunities. Students are introduced to the characteristics of business process, enterprise systems, and SAP ERP. Students use the Alice 3D visual programming environment and Java standard edition software to learn fundamental object oriented programming concepts.

CISM 2230 Advanced Java
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
This course extends the fundamental principles of object-oriented programming using Java as our tool. The focus of this class is on advanced applications development. Topics include: objects, classes, inheritance, interfaces, GUI components, layout managers, events, multimedia, exception handling, and I/O files.
Prerequisite(s): A "C" or better in CSCI 1236 (or equivalent) and a solid programming foundation.

CISM 2530 Advanced Business Applications
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
This course will provide students with hands-on experience in creating advanced business applications using spreadsheet and database management system (DBMS) tools. Advanced topics in word-processing and presentation tools will also be explored.
Cross Listing(s): CISM 2530H.

CISM 2530H Advanced Business Applications (Honors)
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
This course will provide students with hands-on experience in creating advanced business applications using spreadsheet and database management system (DBMS) tools. Advanced topics in word-processing and presentation tools will also be explored.
Cross Listing(s): CISM 2530.

CISM 3131 Management Information Systems
3 Credit Hours. 2 Lecture Hours. 2 Lab Hours.
An overview of the utilization of information technology in business organizations to support managerial decision making and to provide competitive advantage. This course will address the evolution of information and information technology as corporate assets, how information technology is reshaping organization structures and work processes, how it is changing business relationships among organizations, and emerging information technologies expected to significantly impact business operations in the years ahead.
Prerequisite(s): A minimum grade of "C" in all of the following: CISM 2530 and ACCT 2101 or ACCT 2030 and Sophomore standing.

CISM 3134 Data Communications
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
An overview of traditional and emerging telecommunications technologies and applications in today's business environment including voice, data, and video communications. The application of business telecommunications to satisfy information system requirements is emphasized.
Cross Listing(s): CISM 3134S.

CISM 3134S Data Communications
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
An overview of traditional and emerging telecommunications technologies and applications in today's business environment including voice, data, and video communications. The application of business telecommunications to satisfy information system requirements is emphasized.
Cross Listing(s): CISM 3134.

CISM 3135 Systems Analysis and Design
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
Introduces the fundamental principles of information systems analysis and design. In this course, students will learn to apply the tools and techniques commonly used by systems analysts to build and document information systems. Classical and structured tools for describing data flow, data structure, process flow, file design, input and output design, and program specifications will be studied. Object-oriented concepts and techniques will also be introduced.
Prerequisite(s): A minimum grade of "C" in CISM 2530 and Sophomore standing.

CISM 3237 Visual Basic.Net Windows and Web Applications Programming
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
This course introduces students to Visual Basic.Net which is a leading edge object oriented programming language that integrates with .Net platform to provide a programming component for Windows applications, as well as Internet and World-Wide-Web applications. The student will be exposed to and learn topics related to object oriented programming, strings, graphics, graphical-user-interface components, exception handling, multithreading, multimedia (audio, images, animation and video), file processing, prepackaged data structures, database processing, Internet and World-Wide-Web based client/server networking and distributed computing.
Prerequisite(s): CISM 2230.

CISM 3331 Principles of Enterprise Information Systems Security
0.3 Credit Hours. 0.2 Lecture Hours. 0.1 Lab Hours.
An introduction to the various policy, administration, management, and technical aspects of information systems security across the enterprise. This course provides the foundation for understanding key policies and issues associated with protecting information assets; designing a consistent, reasonable information security system; identifying alternatives for determining the necessary levels of protection; and developing and administering appropriate responses to security incidents. Included are design issues for appropriate intrusion detection, disaster incidents, and reporting for various enterprise networking infrastructures.
Prerequisite(s): A minimum grade of "C" in CISM 3134.
Cross Listing(s): CISM 3331S.
CISM 3331S Principles of Enterprise Information Systems Security  
0.3 Credit Hours. 0.2 Lecture Hours. 0.1 Lab Hours. 
An introduction to the various policy, administration, management, and technical aspects of information systems security across the enterprise. This course provides the foundation for understanding key policies and issues associated with protecting information assets; designing a consistent, reasonable information security system; identifying alternatives for determining the necessary levels of protection; and developing and administering appropriate responses to security incidents. Included are design issues for appropriate intrusion detection, disaster incidents, and reporting for various enterprise networking infrastructures. 
Prerequisite(s): A minimum grade of "C" in CISM 3134 and CISM 3135. 
Cross Listing(s): CISM 3331.

CISM 3333 ERP Systems Using SAP  
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours. 
Focuses on Enterprise Planning (ERP) using SAP R/3. Students will spend computer intensive time navigating in SAP and completing SAP lab assignments. Currency in ERP developments by subscribing to Internet newsletters on ERP or SAP developments is required. Students will also be required to complete a major ERP project and give a presentation on important recent ERP developments. 
Prerequisite(s): A minimum grade of "C" in ACCT 2101 or ACCT 2030. 

CISM 4134 Database Management  
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours. 
An applied study of business databases, their design, and implementation. The focus of the course is on application development with fourth generation systems. Applications using a third generation host language and application generators are used to demonstrate concepts and techniques. 
Prerequisite(s): A minimum grade of "C" in CISM 2530 and Junior standing. 

CISM 4135 Project Management and Development  
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours. 
The course focuses on principles and processes of project management, specifically as they relate to the development of information systems to solve business problems. The fundamentals of organizational behavior, systems theory and systems dynamics, as well as the important components of project management such as planning, organizing, directing, and controlling are covered. In addition, team building and working with others is emphasized to improve efficiency and effectiveness. The students will have an opportunity to work with current Project Management software tools to emphasize the application of these concepts. 
Prerequisite(s): Junior standing. 
Cross Listing(s): CISM 4135S. 

CISM 4135S Project Mgt & Development  
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours. 
The course focuses on principles and processes of project management, specifically as they relate to the development of information systems to solve business problems. The fundamentals of organizational behavior, systems theory and systems dynamics, as well as the important components of project management such as planning, organizing, directing, and controlling are covered. In addition, team building and working with others is emphasized to improve efficiency and effectiveness. The students will have an opportunity to work with current Project Management software tools to emphasize the application of these concepts. 
Prerequisite(s): Junior standing. 
Cross Listing(s): CISM 4135. 

CISM 4136 Global Information Resource Management  
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours. 
A study of the international management of the organization's information systems function from the perspective of information as a critical organization resource and as a key to competitiveness in the global market. Emphasis will be placed on the application of technology to meet information systems requirement. 
Prerequisite(s): A minimum grade of "C" in CISM 3134 and CISM 3135. 
Cross Listing(s): CISM 4136S. 

CISM 4136S Global Information Resource Management  
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours. 
A study of the international management of the organization's information systems function from the perspective of information as a critical organization resource and as a key to competitiveness in the global market. Emphasis will be placed on the application of technology to meet information systems requirement. 
Prerequisite(s): A minimum grade of "C" in CISM 3134 and CISM 3135. 
Cross Listing(s): CISM 4136.

CISM 4237 Business Intelligence  
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours. 
This course is an introduction to business intelligence and business analytics. Students will be exposed to recent technological developments in these areas, as well as best practices. 
Prerequisite(s): A minimum grade of "C" in ACCT 2101. 
Cross Listing(s): CISM 4237H. 

CISM 4237H Business Intelligence Honors  
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours. 
This course is an introduction to business intelligence and business analytics. Students will be exposed to recent technological developments in these areas, as well as best practices. 
Prerequisite(s): A minimum grade of "C" in ACCT 2101. 
Cross Listing(s): CISM 4237.

CISM 4238 Network Administration  
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours. 
An applied study of the problems inherent in the maintenance and management of the heterogeneous networking environments prevalent in the modern business enterprise. Emphasis will be placed on acquiring and integrating the practical management/technical skills that define the effective networking specialist. 
Prerequisite(s): A minimum grade of "C" in CISM 3134. 
Cross Listing(s): CISM 4238S. 

CISM 4238S Network Administration  
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours. 
An applied study of the problems inherent in the maintenance and management of the heterogeneous networking environments prevalent in the modern business enterprise. Emphasis will be placed on acquiring and integrating the practical management/technical skills that define the effective networking specialist. 
Prerequisite(s): A minimum grade of "C" in CISM 3134. 
Cross Listing(s): CISM 4238.

CISM 4239 Advanced Business Analytics with SAP HANA  
3 Credit Hours. 2 Lecture Hours. 2 Lab Hours. 
This course covers advanced practices and concepts in the areas of business intelligence and business analytics. The course will emphasize the data foundation required to support business intelligence and business analytics, rather than associated applications. Special emphasis will be given to the SAP HANA big data platform. 
Prerequisite(s): A minimum grade of "C" in CISM 4237 and CISM 4134 or IT 3233.
CISM 4332 Electronic Business
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
This course focuses on the linkage between organizational strategy and networked information technologies to implement a rich variety of business models in national and global contexts connecting individuals, business, governments, and other organizations to each other. The course examines e-business strategy and the development and architecture of e-business solutions and their components.
Prerequisite(s): CISM 2230 and CISM 3134, MKTG 3131.

CISM 4333 Human Resource Information Systems
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
A study of how human resource information systems are applied in organizations to support organizational strategy, improve efficiency and flexibility, increase productivity and performance, and ensure compliance with employment law. The focus will be on merging computer technology with a strategic human resource management perspective.
Prerequisite(s): A minimum grade of "C" in MGMT 3334.
Cross Listing(s): MGMT 4333 and MGMT 4335.

CISM 4335 Advanced Business Applications Programming (ABAP) for the SAP/ERP System
3 Credit Hours. 2 Lecture Hours. 1 Lab Hour.
This course provides an overview of the ABAP programming language for the SAP enterprise resource planning system. Students will learn how to access database tables, design input screen selections and generate output list reports. Students will write a variety of beginning and intermediate level programs using the ABAP workbench, ABAP objects, and data dictionary tools. Modular programming techniques such as subroutines, function modules, and events will also be discussed.
Prerequisite(s): A minimum grade of "C" in all of the following: CISM 2230 and CISM 3333 and prior or concurrent enrollment in CISM 4134 or IT 3233.

CISM 4336 ERP and Enterprise Performance
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
This course provides an overview of Enterprise Resources Planning (ERP) systems and their impact on organizations. Organizational interest in integrated enterprise information systems and the factors that drive businesses to select and implement these solutions are addressed. Research evidence demonstrating the impact of ERP systems on enterprise performance is reviewed and students gain further understanding of the integrative nature of ERP systems by completing exercises using simulated ERP environments.
Prerequisite(s): A minimum grade of "C" in ACCT 2101 or ACCT 2030; Completion of MGMT 3430 and CISM 3333 is required.

CISM 4434 Enterprise System Configuration
0.3 Credit Hours. 0.2 Lecture Hours. 0.1 Lab Hours.
This course focuses on configuring and testing an Enterprise Resource Planning (ERP) system for use in a large organization. Students learn how to setup a trading company from the ground up using SAP R/3. Throughout the semester, students will create and test the organizational structure, master data and business rules to integrate different functional business processes such as purchasing, sales, distribution, logistics, accounts payable, accounts receivable, etc. Students can also be expected to complete a major project working in cross-functional teams to configure and test an ERP system.
Prerequisite(s): A minimum grade of "C" in CISM 3333.

CISM 4435 ERP Web Portal Customization and Collaboration using SAP NetWeaver
3 Credit Hours. 3 Lecture Hours. 0 Lab Hours.
This course focuses on how and why web-based ERP systems such as SAP Enterprise Portals are customized to extend their support of business processes. The course applies web portal customization and collaboration tools to illustrate key course concepts. The characteristics and benefits of enterprise web portals are examined along with the tools and processes used to implement and measure their success.
Prerequisite(s): A minimum grade of "C" in CISM 3333.