

COMPUTER INFORMATION SYSTEMS (CIS)

CIS 1375 - Information Systems and Technology

3 Credits

This course introduces how information systems and computer technology interrelate to collect, manipulate, and disseminate data and information within the context of business and industry. Students examine the main concepts of computer hardware and software, the survey of methodologies employed by business firms to harness the power of information technology for strategic purposes, the fundamental information systems design and development processes, and the impact of information systems on the individual, organization, and society.

Restrictions:

Enrollment limited to students in the Schl for Professional Studies college.

Attributes: Prof. Studies Students Only, UUC:Natural & Applied Science

CIS 1600 - Introduction to Programming

3 Credits

This course introduces students to the foundational concepts of computer programming. Students learn the steps involved in creating computer programs using the Java programming language and its associated tools. Through exercises, assignments and exams, students are guided in learning the key programming concepts that are drawn primarily from the object-oriented programming paradigm.

Restrictions:

Enrollment limited to students in the Schl for Professional Studies college.

Attributes: Prof. Studies Students Only

CIS 2300 - Data-Driven Decision Making

3 Credits

Data-Driven Decision Making introduces students to the role that data analytics plays within an organization. Students will be introduced to a framework for conducting decision making using spreadsheet tools. Upon completing the course, students will be able to apply more deliberate, valid, and ethical evidence-based decision-making strategies appropriate to a given situation.

Restrictions:

Enrollment limited to students in the Schl for Professional Studies college.

CIS 2775 - Discrete Methods and Models

3 Credits

After successfully completing this course the student will be able to: Examine the practical aspects of using discrete methods for understanding, modeling, and interpreting data within industry. Topics presented in this course are directed toward employing statistical and discrete methods for problem solving.

Restrictions:

Enrollment limited to students in the Schl for Professional Studies college.

Attributes: Prof. Studies Students Only, UUC:Quantitative Reasoning

CIS 2875 - Principles of Data Analysis

3 Credits

This course examines the concepts, techniques and methods used in the description and analysis of data and in statistical inference. Topics presented in this course are directed towards the analysis of experimental and survey data. Microsoft Excel software will be used as a tool to collect, organize, and process data.

Restrictions:

Enrollment limited to students in the Schl for Professional Studies college.

Attributes: Prof. Studies Students Only, UUC:Quantitative Reasoning

CIS 2930 - Special Topics

1-3 Credits (Repeatable for credit)

Restrictions:

Enrollment limited to students in the Schl for Professional Studies college.

Attributes: Prof. Studies Students Only

CIS 2980 - Independent Study

1-3 Credits (Repeatable for credit)

Restrictions:

Enrollment limited to students in the Schl for Professional Studies college.

Attributes: Prof. Studies Students Only

CIS 3000 - System Analysis and Design

3 Credits

This course provides a business-oriented approach to the analysis and design of computer information systems. Exercises in the analysis, design, implementation, testing and maintenance of a modular application will provide the student with the foundation knowledge needed in today's computer technology field. Topics include software engineering goals, software design methodologies, human interface design, and organizational issues.

Restrictions:

Enrollment limited to students in the Schl for Professional Studies college.

Attributes: Prof. Studies Students Only

CIS 3150 - Workplace Ethics

3 Credits

An interdisciplinary examination of basic ethical theories and value systems and how they impact society. The course will analyze a variety of ethical dilemmas that prevail in today's workplace and how to mediate them for making workplace decisions. An emphasis will be placed on the roles and responsibilities that professionals have in directing organizations and emerging technologies. Offered occasionally.

Restrictions:

Enrollment limited to students in the Schl for Professional Studies college.

Attributes: Prof. Studies Students Only

CIS 3250 - Cybersecurity Principles

3 Credits

Cybersecurity Principles provides an overview of the field of Cybersecurity. Students will explore the key concepts of data and technology that frame and define cybersecurity. Upon completing the course, students will be able to apply security concepts involved in maintaining a secure computer networking environment.

Prerequisite(s): CIS 1600

Restrictions:

Enrollment limited to students in the Schl for Professional Studies college.

CIS 3300 - Database Analysis and Design

3 Credits

A detailed overview of the fundamental concepts of database analysis, design, and implementation with emphasis on the relational model. The course will cover databases used in today's networked client-server applications. Topics include ANNSI SQL, data normalization, tables, queries, reports, forms, security, replication, data layout, and backup/recovery.

Restrictions:

Enrollment limited to students in the Schl for Professional Studies college.

Attributes: Prof. Studies Students Only

CIS 3850 - Analytics and Visualizations

3 Credits

Analytics and Visualizations is a project based course designed to develop a student's analytics knowledge applying statistics to decision making. Students will learn modeling techniques to organize, manage and present data in formats appropriate for multiple audiences. Upon completing the course, students will be able to apply analytics and modeling in a deliberate and valid evidence-based decision-making process.

Prerequisite(s): CIS 1600

Restrictions:

Enrollment limited to students in the Schl for Professional Studies college.

CIS 3930 - Special Topics

3 Credits (Repeatable for credit)

CIS 3980 - Independent Study

1 or 3 Credits (Repeatable for credit)

CIS 4100 - Technology Strategy and Decision Making

3 Credits

The alignment of business and IT technology is key in supporting the strategic plan of an organization. This course explores the analysis, design, implementation, evaluation, and management of enterprise IT solutions to support the organizational objectives within a competitive context. Topics include functional modeling, physical architecture design, security planning and recovery issues, project management, emerging technologies, and financial and global considerations.

Prerequisite(s): CIS 3000

Restrictions:

Enrollment limited to students with a classification of Senior.

Enrollment limited to students in the Schl for Professional Studies college.

Attributes: Prof. Studies Students Only

CIS 4150 - Data Governance

3 Credits

Data governance considers data as enterprise asset. This course issues related to data storage and governance in an organizational context. Topics will include the policies, standards, processes, and regulations that are associated with management of data.

Restrictions:

Enrollment limited to students in the Schl for Professional Studies college.

Attributes: Prof. Studies Students Only

CIS 4250 - Survey of Machine Learning

3 Credits

Machine Learning surveys the theory and application of statistical machine learning, examining computational methods for both supervised and unsupervised analysis. Students will explore machine learning solutions on various datasets and selected real-world problems. The course will present a broad section of models and algorithms for machine learning in business and industry.

Prerequisite(s): CIS 1600

Restrictions:

Enrollment limited to students in the Schl for Professional Studies college.

CIS 4300 - The Fundamentals of Computer Forensics

3 Credits

The course offers computer forensics theory and methodology. The course explores how to find traces of illegal or illicit activities left on a disk with computer forensic tools and manual techniques. The student will learn about the elements of an effective computer crime policy. It is a study of the investigations of computer crime from both a legal and technical perspective.

Prerequisite(s): CIS 1600

Restrictions:

Enrollment limited to students in the Schl for Professional Studies college.

Attributes: Prof. Studies Students Only

CIS 4600 - Cyber Threats and Defense

3 Credits

Cyber Threats and Defense reviews security principles, controls, and monitoring technologies from both a network defense and offensive perspective. The course will develop a student's competencies related to detecting and analyzing network vulnerabilities and threats. At the completion of the course, students will be able to design and implement a systematic plan for defending domestic and organizational networks from internal and external threats.

Prerequisite(s): CIS 3250

Restrictions:

Enrollment limited to students in the Schl for Professional Studies college.

Attributes: Prof. Studies Students Only

CIS 4700 - Advanced Database Systems

3 Credits

This course provides advanced study in how to develop and implement a business oriented, data-driven information system. Students will design, construct, test, and install a database system using fourth generation event-driven languages and/or other data access tools.

Prerequisite(s): CIS 3300**Restrictions:**

Enrollment limited to students in the Schl for Professional Studies college.

Attributes: Prof. Studies Students Only**CIS 4750 - Data Mining**

3 Credits

Data mining is the process of turning a large amount of data into useful information. This course presents the concepts, techniques, and applications of data mining in an organizational context. Topics covered will include data selection and cleansing, predictive analytics, classification, associative rule mining, clustering, and visualization.

Prerequisite(s): CIS 3300**Restrictions:**

Enrollment limited to students with a classification of Senior.

Enrollment limited to students in the Schl for Professional Studies college.

Attributes: Prof. Studies Students Only**CIS 4800 - Computer Information Systems Capstone Experience**

3 Credits (Repeatable for credit)

The capstone experience course provides students with a service-learning opportunity where they work with an organization of their choice to identify and define a problem that is of importance to the organization, design and implement a solution that is deemed satisfactory by the organization, within the various constraints of associated with the implementation. Students are required to have one faculty member and one member of the sponsoring organization as supervisors and guides who help them in completing their project successfully. During this course, students are expected to demonstrate a synthesis and application of the knowledge and Jesuit ideals learned during.

Prerequisite(s): CORE 1500* ; CORE 1000

* Concurrent enrollment allowed.

Restrictions:

Enrollment limited to students with a classification of Senior.

Enrollment limited to students in the Schl for Professional Studies college.

Attributes: UUC:Reflection-in-Action**CIS 4930 - Special Topics**

1-3 Credits (Repeatable for credit)

Restrictions:

Enrollment limited to students in the Schl for Professional Studies college.

Attributes: Prof. Studies Students Only**CIS 4980 - Advanced Independent Study in Computer Information Systems**

1-3 Credits (Repeatable for credit)

Restrictions:

Enrollment limited to students in the Schl for Professional Studies college.

Attributes: Prof. Studies Students Only