CIS-Computer Info Systems

CIS110 - Introduction to Information Systems

This course is an introductory study of information systems. Major topics include: the role and value of information systems, hardware and software used in information systems, managing information and data resources, decision making, and developing information systems.

CIS120 - Application Programming I

This course provides students with an understanding of business problems that are typically solved by writing computer programs, problem solving techniques to enable students to design solutions, and programming skills learned in a traditional CS1 course. Emphasis is placed on efficient software development for business related problems. Students are required to write, test and run programs.

CIS207 - Data Preparation and Cleaning

This course provides students with an introduction to the need for and methods for data cleaning. The course presents methods for locating and handling invalid values, out-of-range values, and missing values along with methods for managing datasets. The course uses SAS software.

CIS213 - Data Visualization

This course explores techniques and tools for creating effective data visualizations. The course covers the creation and exploration of visualizations for categorical data, time series data, spatial and geospatial data. SAS software will be used for this course.

CIS220 - Application Programming II

This course provides students with advanced techniques for design and implementation of business solutions using object-oriented programming concepts. This course also covers the data structures that are typically learned in a traditional CSC course. Emphasis is placed on efficient software development for business related problems. Students are required to write, test and run programs.

CIS251 - Big Data Tools

This course covers an introduction to big data analysis tools. The course provides an overview of SAS, Hadoop and other big data tools. The course covers the structure and framework of data analytic tools and covers the use of these tools to perform various analyses.

CIS261 - Big Data Analytics

This course is intended to provide the student with an introduction to big data, big data analytics and several methods useful in big data analytics such as clustering, association rules and various forms of regression. SAS® statistical software will also be introduced and used to solve data problems.

CIS299 - Systems Analysis I

This project course introduces students to "systems thinking" and experientially introduces the students to some of the basic concepts and tools of systems analysis within the context of a real-life business problems. The traditional SDLC waterfall approach to systems analysis and design is stressed in order to prepare students for any business type or size (some of which may not have modern analysis and design tools). Students entering into this course must have a basic understanding of business and the idea of using programs that are integrated into systems to solve business problems. This requisite knowledge is built upon in teaching students how to analyze a business's current information system; how to extrapolate user needs and the business's additional processing requirements; and then how to design a system that not only meets the stipulated requirements

while remaining within the project's constraints, but remains in line with the entity's mission/vision and optimizes business processes to position the entity more competitively in the market.

CIS302 - Visual Programming

This course teaches Windows applications programming using the object-oriented event-driven programming paradigm, with the programming language VisualBasic.NET. It is designed as a beginning OOED programming course, but assumes students know Windows object vocabulary, have basic Windows file management skills, and are familiar with the generic procedural programming language constructs of decision structures and looping.

CIS304 - COBOL

This course introduces students to the essential elements of the COBOL language using well-structured programming techniques. Students will write and execute report programs, control break programs, data validation programs, programs that implement tables and sequential update programs. Good analysis, design and structure will be emphasized.

CIS308 - Python

This course enables the student to acquire a thorough understanding of the Python language and its application in solving real world problems. Emphasis is placed on efficient software development using structured programming techniques, Object Oriented Programming, GUI interfaces, as well as a variety of Python modules and packages. Students are required to design, write, test, and run programs using an appropriate version of Python.

CIS321 - Data Base Management Systems and Data Base Design

This introductory course to DBMS (Database Management System) provides students with the theory and practice behind the use of modern DBMS. Database terminology and concepts covered include, but are not

limited to, the logical and physical design of databases and the tables within them as determined through the analysis of information needs and modeling; the creation of ERD (Entity Relationship Diagrams) and their translation into relational schemas (logical and physical design); normalization techniques; DDL (Data Definition Language) and SQL (Structured Query Language) for database, table, view and index creation; and database performance and optimization.

CIS322 - Data Base Application Development

Building upon the conceptual understanding of a modern DBMS (Database Management System) and database and table design concepts gained in CIS 321 Database Management Systems and Design, this course provides students with the practice of applying database technology via the Oracle DBMS to the solution of business and other information-related problems. Experience is provided with database design and implementation based on a thorough analysis of requirements and information modeling. The use of Structured Query Language (SQL) for interaction with a working DBMS for data creation, manipulation and extraction is stressed as well as optimization techniques, such as view creation and indexing. PL/SQL and database triggers are introduced.

CIS325 - Introduction to Decision Support Systems

This course presents the concept of decision-making within the framework of a contextualized management information system that utilizes databases or spreadsheets as tools in the problem- solving process. The course distinguishes between two logical components of a management information system: the transactional processing systems (TPS) and decision support systems (DSS), in which computer-based systems aid decision-makers in confronting problems through direct interaction with data and analysis models. Some of the topics covered include critical thinking problem-solving through decision support, information requirements diagramming and influence diagramming, modeling, decision-making, frames of references in decision-making, and decision-making techniques such as goal seeking, "What If" scenarios and graphic displays.

CIS330 - Web Programming I

This course is designed for the Computer Information Systems major. It provides the student with a thorough understanding of HTML, in order to enable the student to create Web pages and Web sites using HTML. It also provides the student with a thorough understanding of at least one client-side scripting language, in order to enable the student to begin creating data-base driven Web sites. Students are required to write and test Web pages and Web sites that use client-side scripts.

CIS332 - Web Programming II

This course introduces the student to server-side technologies. Students are required to write and test database driven websites that use both client-side and server-side scripts.

CIS341 - CISCO CCNA 1

This course is designed for the information systems major. It is the first in a series of four CCNA (Cisco Certified Networking Associate) courses. It provides the student with a thorough understanding of basic computer networking concepts.

CIS342 - CISCO CCNA 2

This course is designed for the information systems major. It is the second in a series of four CCNA (Cisco Certified Networking Associate) courses. It provides the student with a thorough understanding of the router basics involved in computer networking.

CIS343 - CISCO CCNA 3

This course is designed for the information systems major. It is the third in a series of four CCNA (CISCO Certified Networking Associate) courses. It provides the student with a thorough understanding of the switching basics and intermediate routing involved in computer networking.

CIS344 - CISCO CCNA 4

This course is designed for the information systems major. It is the fourth in a series of four CCNA (Cisco Certified Networking Associate) courses. It provides the student with a thorough understanding of wide area network (WAN) technologies and their role in computer networking.

CIS352 - Global, Economic and Social Ethical Issues in Computing

This course covers issues related to various global, economic and social frameworks and moves to topics specifically related to computers. Emphasis is placed on the study of ethical situations that arise as a consequence of the development and deployment of computers and related technologies, and also from parties with malicious intents toward prevalent technologies. Topics can include areas such as: security, economics of information systems, computer crime and hacking, computer software ownership, privacy, risks of computing, professional liability, internet freedom in computing and international laws and governance. The course is to be delivered in a writing intensive format, with treatise and arguments communicated effectively to a wide variety of audiences.

CIS354 - Systems Project Management

This course, taken from the latest Model Curriculum for Information Systems (IS 2002), is intended for CIS or CS majors. Building on the systems analysis and design concepts of CIS 299, this course focuses on the

management and completion of a systems-software development project. Both technical and behavioral aspects of project management are applied within the context of an information systems development project.

CIS401 - Concepts in Enterprise Resource Planning

This course will provide students an overview of the fundamental business processes/systems used to run organizations and how the increase in their system integration adds value, improves productivity and increases growth. The basic functional areas of business and their related information systems are reviewed with emphasis on identifying opportunities for business process reengineering. ERP software, the latest trends and industry best practices in ERP implementations will be discussed.

CIS402 - Data Analysis Capstone Project

This course is designed for the certificate in Data Science to provide hands-on experience in the area of data science. This experience will enable students to apply their knowledge of data science and provide valuable experience in the application of methods studied within the program that should enhance their job opportunities upon graduation. Students will receive experience with real world data. Analysis will be completed using SAS®

CIS419 - CIS Internship

This course is designed for majors in the computing-disciplines who are seeking work experience in a related area. This intern experience will enable the student to apply her/his educational background in his/her field to a real work place. The internship will provide the student with the valuable experience that should enhance the student's job opportunities upon graduation. Prerequisite: Students should have completed 64 credits with a good grade-point average plus have sufficient background to meet the needs of the particular internship in which they will be participating. Variable credits (1-15) depending on the length of the internship and the number of hours devoted to the internship.

CIS474 - Special Topics in Information Systems

This course allows current topics in information systems to be offered to the students in a timely fashion. The topics are not covered in other courses and will not be regularly offered as a special topic. The student is able to take the course several times as long as the course is covering topics different than those already taken. The course topic depends on the current trends in the field of information systems and the interests of the students and the instructor.

CIS490 - Systems Analysis II

This course introduces students to systems application development. They will study its history and terminology. The students will write requirements, specifications and design documents, and one or more papers on software development life cycles.

CIS492 - Systems Development and Implementation

This course is a continuation of the Senior Project I: Application Software Development course and the capstone course of the program. The project proposal developed and designed in the first Senior Project class will be implemented in this course. The student will produce a project users' manual and will demonstrate proficiency in the academic program through the development of the project.