

## COMPUTER INFORMATION SYSTEMS

### CIS 107 WEB PROGRAMMING FOR BUS

3 Lecture 0 Lab 3 Credit Hours(s)

This course will introduce the student to conducting business on the Internet. To remain competitive, many companies and entrepreneurs have established a presence on the Internet and are actively involved in conducting business on the net. The student will be exposed to the vast business potential of the net including creating effective web sites using HTML (Hypertext Markup Language), cascading style sheets, imaging and search engine optimization.

Prerequisite: CIS 111

### CIS 108 CONDUCTING RESEARCH ON INTERNET

3 Lecture 0 Lab 3 Credit Hours(s)

This course will introduce the student to the Internet. Students will be provided with necessary skills to effectively explore the information highway in a disciplined and academically productive manner. Students will have the opportunity to conduct in-depth research using the many electronic information resources available in cyberspace. Students will design and develop a web site to report the results of their research.

### CIS 111 COMPUTER SYSTEMS & APPLICATIONS

3 Lecture 0 Lab 3 Credit Hours(s)

This course introduces the student to the basic terminology and concepts of computer information systems. Topics include: computer business applications, computer components, software design, operating systems, databases, data communications, computer ethics, computer security, and management information systems. Practical hands-on experience will be provided using popular integrated microcomputer application software in database, spreadsheet and word processing management.

### CIS 112 COMPUTER PROGRAMMING I

4 Lecture 0 Lab 4 Credit Hours(s)

A course designed to introduce methods of solving computer business-oriented problems. A high level programming language is used to learn arithmetic, relational and logical operations, structured programming techniques, table manipulation, I/O data formats and internal subroutines. Programming activities involve problem definition, analysis, solution and documentation. No prior programming experience required.

### CIS 117 DATA COMMUNICATION CONCEPTS

3 Lecture 0 Lab 3 Credit Hours(s)

This course is designed to introduce the students to the concepts of data, voice and video communications. Topics include communication terminology, local and

wide area networks, transmission media, data integrity and security, network management, maintenance of applications and networking operating systems. In addition, current policy issues involved with the communication industry will be examined.

Prerequisite: CIS 111 or concurrent enrollment, or permission of the department

### CIS 120 COMPUTER BASED PUBLISHING

3 Lecture 0 Lab 3 Credit Hours(s)

This course will provide the student with the necessary skills to electronically publish material in a variety of mediums. In particular, the course will concentrate on desktop publishing and world wide web publishing. The students will be exposed to a variety of popular software packages such as Adobe Photoshop, Adobe InDesign, Adobe FLASH and Adobe Acrobat.

Prerequisite: CIS 111 or concurrent enrollment, or permission of the department

### CIS 123 COMPUTER PROGRAMMING II

3 Lecture 0 Lab 3 Credit Hours(s)

A course designed to present intermediate features and interrelations of the curriculum's high-level programming language. Topics include advanced language specifications and syntax, object oriented concepts, input-output processing, advanced storage allocation, multidimensional arrays, data types and organizations, and subroutine linkage. Established algorithms utilized in searching and sorting data are covered in detail.

Prerequisite: CIS 112 with a grade of C or better.

### CIS 124 COMPUTER OPERATING SYSTEMS

3 Lecture 0 Lab 3 Credit Hours(s)

A systems-oriented course concentrating on methods and procedures that increase the efficiency and effectiveness of a computer installation. Topics include systems control programs, systems service and utility programs, operating system concepts, virtualization, Windows and the Powershell scripting language.

Prerequisite: CIS 112 or CPS 141, with a grade of C or better.

### CIS 126 LINUX USING PYTHON

3 Lecture 0 Lab 3 Credit Hours(s)

This course will provide the student with an understanding of the functions of a LINUX based operating system. The LINUX/UNIX system will be utilized to provide the student with hands-on experience relating to the course concepts including basic UNIX commands, utilities, windowing systems, filters, shell programming, file systems, network communication, program execution and basic system programming.

Prerequisite: CIS 111

### CIS 140 HEALTH INFORMATION MANAGEMENT

3 Lecture 0 Lab 3 Credit Hours(s)

The course is organized around the HIPAA components of terminology, transaction framework, planning, privacy and security. It applies across a diversity of medical systems including call centers, nurse triage, financial, accounting, marketing, resources planning, imaging and claims clearinghouse systems.

Prerequisite: CIS 111.

### CIS 150 INFORMATION SECURITY MANAGEMNT

3 Lecture 0 Lab 3 Credit Hours(s)

This course examines the field of information security to prepare information systems students for their future roles as business decision-makers. It presents a balance of the managerial and the technical aspects of the discipline with a focus on cyber security.

Pre- or corequisite: CIS 111

### CIS 211 APPLIED DATABASE CONCEPTS

3 Lecture 0 Lab 3 Credit Hours(s)

This course is designed to present data access and data storage concepts using a relational database platform. SQL (Structured Query Language) will be utilized in both interactive and embedded mode. The course will incorporate relational concepts, data modelling, application development, big data analysis, cloud storage and programming. Currently, the Oracle database platform along with the Microsoft platform are being utilized. The course will present PL/SQL and Visual Basic as supporting programming languages.

Prerequisite: CIS 123 with a grade of C or better.

### CIS 212 SYSTEMS ANALYSIS AND DESIGN

3 Lecture 0 Lab 3 Credit Hours(s)

The life cycle of the development of a computer-based CIS information processing application. Topics include management information systems, the systems study, charting and documentation, I/O design considerations, controls and audit trails, equipment and software selection, implementation and maintenance. A case study, which applies the course concepts, is currently being used.

Prerequisite: CIS 112 or CPS 141, with a grade of C or better.

### CIS 213 DATA ANALYTICS FOR BUSINESS

3 Lecture 0 Lab 3 Credit Hours(s)

This course is designed to include more advanced operations, applications and capabilities of software within a business environment. Topics include: operating system functions; file management; advanced database management; advanced spreadsheet, presentation and management software; data analytic software; and application software integration.

Prerequisite: CIS 111 with a grade of C or better or permission of the department

### CIS 216 WINDOWS SERVER

3 Lecture 0 Lab 3 Credit Hours(s)

This course will introduce the student to the concepts involved in designing, installing, optimizing and maintaining a Windows Server based local area network. The course will approach the subject matter from both a practical and a theoretical perspective.

Pre- or corequisite: CIS 111 or permission of the department

### CIS 218 ROUTING & SWITCHING TECHNOLOGY

3 Lecture 0 Lab 3 Credit Hours(s)

This course will provide the student with the opportunity to study routing and switching technologies in a CISCO based data communication environment. The student will be exposed to TCP/IP, router programming, firewalls and security, as well as computer network design. The material covered will be applied in a communication networking laboratory.

Prerequisite: CIS 117 with a grade C or better.

### CIS 223 MOBILE APP DESIGN & DEVELOPMNT

3 Lecture 0 Lab 3 Credit Hours(s)

Students are provided with the opportunity to function in a realistic business environment. The course focuses on a case study that requires students to apply knowledge from previous computer information systems courses. The project includes the development of a real time software application using a combination of software technologies. A substantial amount of programming will be required in a high level computer language. The project development includes the analysis and design of a solution, the coding of the solution, testing, extensive documentation and concludes with a presentation of the system.

Prerequisites: CIS 212, CIS213 and programming experience in a high level object-oriented computer language

### CIS 227 COMPUTER ARCHITECTURE AND ORG

3 Lecture 0 Lab 3 Credit Hours(s)

A course in IBM 390 Assembler Language designed to introduce students to data types, data structures, I/O processing, macro processing, dumps and debugging, internal and external subroutines and data manipulation.

Prerequisite: CIS 112 with a grade of C or better or CPS 141 with a grade of C or better, or permission of the department

### CIS 228 WEB SITE ADMINISTRATION

3 Lecture 0 Lab 3 Credit Hours(s)

This course will provide the student with an opportunity to learn the necessary skills required to administer a

Web site. The course will include coverage of operating systems, firewalls, security, web hosting and TCP/IP. Client side software including JavaScript will be utilized as well as ASP.NET for server side software. Real time database access using Microsoft SQL. Server will be covered

Prerequisites: CIS 111 and either CIS 107 or CIS 108.

#### CIS 265 CIS CAREER CAPSTONE SEMINAR

3 Lecture 0 Lab 3 Credit Hours(s)

This seminar is designed for matriculated CNC/WAC students. This seminar will involve discussing and evaluating various work experiences. Students will be provided with an opportunity for developing skills to be successful in their chosen career. The seminar will concentrate on the development of interviewing skills, leadership skills, project management skills, communication skills and influence skills in a business environment. The course requires either 120 hours of approved internship experience or the completion of an approved vendor certification.

Prerequisite: CIS 213 or permission of the department

#### CIS 271 SPECIAL STUDY PROJECT I

1 Lecture 0 Lab 1 Credit Hours(s)

A special learning experience designed by one or more students with the cooperation and approval of a faculty member. Proposed study plans require departmental approval. Projects may be based on reading, research, community service, work experience, or other activities that advance the student's knowledge and competence in the field of computer information systems or related areas. The student's time commitment to the project will be approximately 35-50 hours.

#### CIS 272 SPECIAL STUDY PROJECT II

2 Lecture 0 Lab 2 Credit Hours(s)

Similar to CIS 271, except that the student's time commitment to the project will be approximately 70-90 hours.

#### CIS 273 SPECIAL STUDY PROJECT III

3 Lecture 0 Lab 3 Credit Hours(s)

Similar the CIS 271, except that the student's time commitment to the project will be approximately 105-135 hours.