SUBJECTS AND COURSES

COURSE DESCRIPTIONS - COMPUTER INFORMATION SYS (CIS)

CIS 130 Intro to Information System
This course is an introduction to computers that reviews computer hardware and software concepts such as equipment, operations, communications, programming and their past, present and future impact on society. Topics include computer hardware, various types of computer software, communication technologies and program development using computers to execute software packages and/or to write simple programs. Upon completion, students should be able to describe and use the major components of selected computer software and hardware. **3 Credit Hours**

CIS 146 Computer Applications
This course is an introduction to computer software applications, including word processing, spreadsheets, database management, and presentation software. This course will introduce students to concepts associated with professional certifications. **3 Credit Hours**

CIS 147 Advanced Micro Applications
This course is a continuation of CIS 146 in which students utilize the advanced features of topics covered in CIS 146. Advanced functions and integration of word processing, spreadsheets, database, and presentation packages among other topics are generally incorporated into the course and are to be applied to situations found in society and business. Upon completion, the student should be able to apply the advanced features of selected software appropriately to typical problems found in society and business. This course will help prepare students for the MCAS certification. **3 Credit Hours**

CIS 149 Digital Literacy
This course is designed for individuals with little to no prior experience with digital technologies. By the end of the course, students will have a solid understanding of the key concepts and skills related to digital literacy, as well as the confidence to use digital technologies effectively and ethically in their personal and professional lives. Students will learn about the various types of cybersecurity threats, such as malware, phishing, and social engineering attacks and how to avoid digital attacks. The course will help prepare students for the IC3 certification.
3 Credit Hours

CIS 157 Intro to App Dev with Swift
This introductory one-semester course is designed to help students build a solid foundation in programming fundamentals using Swift as the language. Students get practical experience with the tools, techniques, and concepts needed to build a basic iOS system. **5 Credit Hours**

CIS 171 Linux I
CODE - C PREREQUISITE: As required by college. COREQUISITE: As required by college. This course presents fundamental applications in Linux. Included in this course are skills development for OS installation and setup, recompile techniques, system configuration settings, file/folder structures and types, run levels, basic network applications, and scripting. Additionally, the course presents security features from an administrative and user consideration. **NaN Credit Hours**

CIS 189 Co-op for CIS I
This course is part of a series wherein the student works in a degree/program related job. Emphasis is placed on student's work experience as it integrates academic knowledge with practical application through exposure to computer practices in informational technologies environment. The grade is based on the employer's evaluation of each student's productivity, content of a descriptive report submitted by the student, and student development and assessment of a learning contract. This course is a CIS elective. **15 Credit Hours**

CIS 199 Network Communications
This course is designed to introduce students to the basic concepts of computer networks. Emphasis is placed on gaining an understanding of the terminology and technology involved in implementing networked systems. The course will cover the OSI and TCP/IP network models, communications protocols, transmission media, networking hardware and software, LANs (Local Area Networks) and WANs (Wide Area Networks), Client/Server technology, the Internet, Intranets and network troubleshooting. Upon completion of the course, students will be able to design and implement a computer network. Students will create network shares, user accounts, and install print devices while ensuring basic network security. They will receive hands-on experience building a mock network in the classroom. This course will help prepare students for the CCNA and Network + certifications. This is a CORE course for the AAT, AAS CIS programs. CIS 161 or CIS 273 may be used as a suitable substitute for this course. If used as a substitute, this is a CORE course. **3 Credit Hours**

CIS 201 Intro to Computer Programming
This course presents fundamental programming concepts. Included in this course are problem solving and algorithms, various design tools, programming structures, variable data types and definitions, modularization, and selected programming languages. Techniques are introduced to enable students to develop programs. This course is a suitable substitution for the programming core of the AAT and AAS CIS programs. **3 Credit Hours**

CIS 202 Python Programming
This course is an introduction to the Python programming language. Topics include input and output, decision structures, repetition structures, functions, working with files, strings, object-oriented programming and inheritance. Upon completion, students will be able to demonstrate knowledge of the topics through the completion of programming projects and appropriate tests. **3 Credit Hours**

CIS 207 Intro to Web Development
This course provides students with opportunities to learn Hypertext Markup Language, cascading style sheets, and JavaScript. At the conclusion of this course, students will be able to use specified markup languages to develop basic Web pages. **3 Credit Hours**

CIS 208 Intermediate Web Development
Students utilize various Web authoring tools to construct and edit Web sites for a variety of applications. Upon completion, students will be able to use these tools to develop or enhance Web sites. **3 Credit Hours**

CIS 209 Advanced Web Development
CIS-207(Intro to Web Development) with a grade of D or higher and CIS-208(Intermediate Web Development) with a grade of D or higher
This course will introduce students to a scripting language. Topics include objects, arrays, methods, and functions. Students will use a scripting language to add interactivity to HTML pages. Upon completion, the student will demonstrate knowledge of the topics through projects and appropriate tests. **3 Credit Hours**

CIS 211 Principles of Information Assu
CODE - C PREREQUISITE: As required by college. This course is designed to introduce students to information security principles. Topics covered in this course will include the need for security, risk management, security technology, cryptography, and physical security. Security policies and legal/ethical issues will also be covered. **3 Credit Hours**

CIS 212 Visual Basic Programming
This course emphasizes Basic programming using a graphical user interface. The course will introduce such topics as advanced file handling techniques, simulation, and other selected areas. Upon completion, the student will be able to demonstrate knowledge of the topics through programming projects and appropriate tests. **3 Credit Hours**

CIS 213 Advanced Visual Basic Program
CIS-212(Visual Basic Programming) with a grade of D or higher
This course is a continuation of CIS 212, Visual Basic. It is designed to enhance student skills in Visual Basic, with an emphasis on understanding techniques and procedures for developing projects using an object-oriented language. **3 Credit Hours**

CIS 214 Security Analysis
CODE - C PREREQUISITE: As required by the college. This course introduces students to the concept of security analysis, or penetration testing, of information systems. Students will evaluate the security of a computer system or network, assessing security risks from the position of a potential attacker. Emphasis is on identifying security flaws and providing technical solutions. **NaN Credit Hours**

CIS 220 App Development with Swift I
This is the first of two courses designed to teach specific skills related to app development using Swift language. **5 Credit Hours**

CIS 222 Database Management Systems
CIS-201(Intro to Computer Programming) with a grade of C or higher
This course will discuss database system architectures. It will teach students how to design, normalize and use a database, and link these to the Web. Students will design and build a database-enabled Web site. Upon completion, the student will be able to demonstrate knowledge of the topics through projects and appropriate tests. **3 Credit Hours**

CIS 225 Intro to Oracle SQL Programmin
This course is designed to give students a firm foundation in concepts of relational databases, to create database structures and to store, retrieve, and manage data. Students will learn to query using Basic SQL statements, restrict, sort, perform single row functions and group the queried data. Students will write advanced SELECT statements and use advanced techniques such as ROLLUP, CUBE, set operators, and hierarchical retrieval. You will query multiple tables, perform nested queries, implement constraints, use data and time functions, and creates sequences and views. Students learn to write SQL and SQL* Plus script files using the iSQL* Plus tool to generate report-like output. Demonstrations and hands-on practice reinforces the fundamental concepts. This course is the first of two courses required to acquire certification as Oracle Certified Associate (OCA). **3 Credit Hours**

CIS 226 Oracle Database Admin I
"This course is designed to give students a firm foundation in basic administration of a database (i.e. Oracle Database 11g or higher). In this class, students learn how to install and maintain an Oracle Database. Students gain a conceptual understanding of the Oracle database architecture and how its components work and interact with one another. Students learn how to create an operational database and properly manage the various structures in an effective and efficient manner including performance monitoring, database security, user management, and backup/recovery techniques. The lesson topics are reinforced with structured hands-on practices. This course is the first of two courses required to acquire certification as Oracle Database Administrator - Oracle Certified Associate (OCA) - maps to Oracle Exam 1Z052. Prerequisite: CIS 117 Database Management Software. Code: C - Potential Area V transfer courses that are subject to approval by respective receiving institutions." **3 Credit Hours**

CIS 227 App Development with Swift II
This course focuses on building specific features for iOS apps. Students apply their knowledge and skills to developing new apps.
5 Credit Hours

CIS 238 Cloud Computing:Infrastructure
CODE - C PREREQUISITE: As required by college. This course focuses on cloud infrastructure, deployment, security models, and the key considerations in migrating to cloud computing. Coverage includes the technologies and processes required to build traditional, virtualized and cloud data center environments, including computation, storage, networking, desktop and application virtualization, business continuity, security and management. **NaN Credit Hours**

CIS 246 Ethical Hacking
CODE - C PREREQUISITE: As required by college. This course emphasizes scanning, testing, and securing computer systems. The lab-intensive environment provides opportunities to understand how perimeter defenses work and how hackers are able to compromise information systems. With awareness of hacking strategies, students learn to counteract those attempts in an ethical manner. **NaN Credit Hours**

CIS 250 E-Commerce
This course is an introduction into e-commerce. Topics include marketing, building an e-commerce store, security, and electronic payment systems. Upon completion, students will be able to build an e-commerce presence. **3 Credit Hours**

CIS 251 C Programming
This course is an introduction to the C++ programming language. This course is intended as a first course in problem-solving and program design. Topics covered include program style, algorithm and data structuring and modularization. Upon completion, the student will be able to demonstrate knowledge of the topics through the completion of programming projects and appropriate tests. **3 Credit Hours**

CIS 252 C++ Programming
This course is a continuation of C++ programming. Techniques for the improvement of application and systems programming will be covered and other topics may include memory management, C Library functions, debugging, portability, and reusable code. Upon completion, the student will been able to demonstrate knowledge of the topics through the completion of programming projects and appropriate tests.
3 Credit Hours

CIS 255 Java Programming
This course is an introduction to the Java programming language. Topics in this course include object-oriented programming constructs, Web page applet development, class definitions, threads, events and exceptions. Upon completion, the student will be able to demonstrate knowledge of the topics through the completion of programming projects and appropriate tests. **3 Credit Hours**

CIS 260 Implementing WIN 2000 Network
This course exposes students to essential concepts of networking security and IT risk management. Topics include design, protocols and administrative principles of secure networks, identification and elimination of threats and vulnerabilities, compliance and operational security, access control and identity management, application, data and host security, cryptography and current and evolving issues in network security. Upon successful completion of this course, students will be able to demonstrate the knowledge and skills necessary to identify security issues, to mitigate and deter threats, to apply security controls and to implement and maintain an organization?s security policies. This course prepares students to sit for the CompTIA Security+ certification exam. Prerequisite: None. Code B - Area V based on appropriate degree and pre-major for individual students **4 Credit Hours**

CIS 267 Enterprise Virtualization
This course is designed to provide students with the knowledge and skills required to implement enterprise visualization. Students will gain hands-on experience installing, configuring, and managing enterprise virtualization technologies. **3 Credit Hours**

CIS 268 Software Support
This course provides students with hands-on practical experience in installing computer software, operating systems, and trouble-shooting. The class will help to prepare participants for the A+ Certification sponsored by CompTIA. **3 Credit Hours**

CIS 269 Hardware Support
This course provides students with hands-on practical experience in installation and troubleshooting computer hardware. The class will help to prepare participants for the A+ Certification sponsored by CompTIA.
3 Credit Hours

CIS 270 Cisco
This course is the first part of a four part curriculum leading to Cisco Certified Network Associate (CNNA) certification. The content of this course is based on current requirements from the CISCO Networking Academy certification standards. **3 Credit Hours**

CIS 271 Cisco II
This course is the second part of a four part curriculum leading to Cisco Certified Network Associate (CNNA) certification. The content of this course is based on current requirements from the CISCO Networking Academy certification standards. **3 Credit Hours**

CIS 272 Cisco III
This course is the third part of a four part curriculum leading to Cisco Certified Network Associate (CNNA) certification. The content of this course is based on current requirements from the CISCO Networking Academy certification standards. **3 Credit Hours**

CIS 273 Cisco IV
This course is the fourth part of a four part curriculum leading to Cisco Certified Network Associate (CNNA) certification. The content of this course is based on current requirements from the CISCO Networking Academy certification standards. **3 Credit Hours**

CIS 275 Workstation Administration
This course provides a study of client system administration in a network environment. Topics include installing monitoring maintaining, and troubleshooting client operating system software and managing hardware devices and shared resources. Students gain hands-on experience in client operating system installation and basic administration of network workstations. **3 Credit Hours**

CIS 276 Server Administration
This course introduces network operating system administration. Topics included in this course are network operating system software installation, administration, monitoring, and maintenance; user, group, and computer account management; shared resource management; and server hardware management. Students gain hands-on experience in managing and maintaining a network operating system environment.
3 Credit Hours

CIS 280 Network Security
This course provides a study of threats to network security and methods of securing a computer network from such threats. Topics included in this course are security risks, intrusion detection, methods of securing authentication, network access, remote access, Web access, and wired and wireless network communications. Upon completion, students will be able to identify security risks and describe appropriate counter measures.This course is designed to prepare students to take the CompTIA Security+ exam. **3 Credit Hours**

CIS 281 System Analysis and Design
This course is a study of contemporary theory and systems analysis and design. Emphasis is placed on investigating, analyzing, designing, implementing, and documenting computer systems. Upon completion, the student will be able to demonstrate knowledge of topics through the completiong of programming projects and appropriate tests.
3 Credit Hours

CIS 282 Computer Forensics
CODE - C PREREQUISITE: As required by college. NOTE: There is an approved standardized plan-of-instruction for this course. This course introduces students to methods of computer forensics and investigations. This course helps prepare students for industry specific certification. **NaN Credit Hours**

CIS 285 Object Oriented Programming
This course is an advanced object-oriented programming course and covers advanced program development techniques and concepts in the context of an object-oriented language. Subject matter includes object-oriented analysis and design, encapsulation, inheritance, polymorphism (operator and function overloading), information hiding, abstract data types, reuse, dynamic memory allocation, and file manipulation. Upon completion, students should be able to develop a hierarchical class structure necessary to the implementation of an object-oriented software system. **3 Credit Hours**

CIS 287 SQL Server
This course will provide students with the technical skill required to install, configure, administer and troubleshoot SQL Server client/server database management system. At the completion of this series students will be able to: identify the features of SQL Server and the responsibilities and challenges in system administration; identify the benefits of integrating SQL Server and setup clients for SQL Server; install and configure SQL Server; manage data storage using database devices and partition data using segments; manage the user accounts; manage user permissions; identify the various task scheduling and alerting abilities of SQL Executive; identify the concepts used in replication and implement replication of data between two SQL Services; identify the types of backup and create backup devices; identify the factors effecting SQL Server performance and the need for monitoring and tuning; locate and troubleshoot problems that occur on the SQL Server.
3 Credit Hours

CIS 289 Computer Problem Determination
The purpose of this course is to allow students to explore current issues related to wireless technology. Students will be able to develop and maintain wireless networks using advancements in current technology.
3 Credit Hours