Computer Information Systems (CIS)

CIS 101 Introduction to Computers

3 Hours

Prerequisites: None

4 hours weekly (2-2)

This course provides an overview of the computing field and its typical applications. Key terminology and components of computer hardware, application software, and system software (including operating systems) are covered along with the development and management of information systems. Other topics include computer career opportunities, various networks (including the Internet), and World Wide Web technologies. This course also provides students with training in the use of business productivity software, including word processing, spreadsheet, and multimedia presentation along with web browser and web application software.

CIS 104 Spreadsheet Design

3 Hours

Prerequisites: None

4 hours weekly (2-2)

This course is designed to provide the business student with skills and knowledge necessary to design and implement practical spreadsheet models using Microsoft Excel software. Students will use basic business mathematics skills to design problem-solving models that can be used in the analysis of data. This course will help the student prepare to take the Microsoft Certified Application Specialist Exam.

CIS 105 Current Operating Systems/Security

3 Hours

Prerequisites: None

4 hours weekly (2-2)

This course is intended for beginners and intermediate end users who want to increase their understanding of computer and information security issues and practices, as well as explore the basics of a current operating system.

CIS 110 Introduction to Word Processing

2 Hours

Prerequisites: None

3 hours weekly (1-2)

This course is designed to provide the student with skills to become effective and efficient in using a popular word processing software. The student will incorporate critical thinking skills along with problem- solving techniques to master this software package. This course is designed for students who would like to master a word processing package and cover many Microsoft Certification exam topics.

CIS 120 Data Base Management

3 Hours

Prerequisites: None

4 hours weekly (2-2)

This course is designed to provide the student with fundamental database concepts. The student will be able to create and maintain tables, forms, queries, and reports. Skills will go beyond that of utilizing the wizards. Customized forms and reports will be developed. Interacting with the Web, setting table relationships, and data integration with other applications will be covered. Many of the

Microsoft Certification exam topics will be covered.

CIS 170 Cisco I

5 Hours

Prerequisites: None

7 hours weekly (3-4)

The CCENT Certification validates the skills required for entry-level network support positions, the starting point for many successful careers in networking. CCENT certified professionals have the knowledge and skill to install, operate, and troubleshoot a small enterprise branch network, including basic network security.

CIS 200 Network Essentials

3 Hours

Prerequisites: None

3 hours weekly (2-2)

This course will provide the student with a general background in networking concepts, procedures and skills necessary in a computer network environment. This course is designed to familiarize the student with an overview of network topologies, physical network architecture, various networking operating systems and a brief introduction into Microsoft Active Directory. This class will also provide the student with necessary skills in troubleshooting and help desk topics necessary for the network's technician and software specialist.

CIS 206 Managing Network Environments I

3 Hours

Prerequisites: CIS 200 or concurrent enrollment

4 hours weekly (2-2)

This course is designed to give the student knowledge and practical experience in administering a Microsoft Server network. Students will be able to describe the principle features of a network operating system and the networking basics of active directory. Students will gain an understanding of the basic components of an information technology system. The student will work with and troubleshoot in the areas of installation of the network operating system, setting up users and groups, assignment of group policy and permissions of a network. This course will assist the student in preparing for an industryrecognized certification exam.

CIS 207 Computer Applications for Business

IAI – BUS 902

3 Hours

Prerequisites: None

4 hours weekly (2-2)

This lecture and hands-on lab course will provide an overview of operating systems, file management techniques, Internet, email and computer conferencing software and apps, basic coding principles for web design, word processing, spreadsheets, database management and presentation software.

CIS 208 Security Awareness

3 Hours

Prerequisites: None

4 hours weekly (2-2)

This course is designed to provide a security awareness overview and emphasize the importance of information systems as well as the home computer system will be covered. Issues will include personal, Internet, and organizational security. Types of security attacks will be discussed, prevention methods will be determined, and recovery plans will be developed. Policies and procedures that will

assist in preventing an invasion of privacy will be covered.

CIS 209 Introduction to Cybercrimes

3 Hours

Prerequisites: Must be 18 years of age or older.

3 hours weekly (3-0)

This course will introduce students to the investigation of computer-based crimes and the importance of preserving and correctly interpreting digital evidence. The course material will review computer crimes and associated terminology and the types of crimes committed in cyberspace. The student will also research and use data collection tools, learn proper collection and preservation of digital evidence, study domestic and international legal issues in cyberspace, and document and report data acquisition findings.

CIS 213 Penetration Testing

3 Hours

Prerequisites: CIS 208

4 hours weekly (2-2)

This course teaches students the underlying principles and many of the techniques associated with the cybersecurity practice known as penetration testing. Students will learn about the entire penetration testing process including planning, reconnaissance, scanning, exploitation, post-exploitation, and result reporting. The course will provide the fundamental information associated with each of the methods employed and insecurities identified. In all cases, remedial techniques will be explored. Students will develop an excellent understanding of current cybersecurity issues and ways that user, administrator, and programmer errors can lead to exploitable insecurities.

CIS 216 Cloud Technology

3 Hours

Prerequisites: CIS 206 with Minimum Grade: C

4 hours weekly (2-2)

Guide to Supporting Microsoft Private Clouds instructs future network administrators how to effectively implement and maintain Microsoft® private clouds with a balance of conceptual expertise and hands-on skills. Ideal for your server administration course, this text prepares students to work with large providers, such as Amazon, Microsoft®, and Google, as well as implement smaller scale cloud computing solutions within their own network environments.

CIS 219 Ethical Hacking

3 Hours

Prerequisites: CIS 209 or CIS 230 with a grade of "C" or higher

4 hours weekly (2-2)

This course provides an in-depth understanding of how to effectively protect computer networks. Students will learn the tools and penetration testing methodologies used by ethical hackers. In addition, the course provides a thorough discussion of what and who an ethical hacker is and how important they are in protecting corporate and government data from cyber-attacks. Students will learn updated computer security resources that describe new vulnerabilities and innovative methods to protect networks. Also covered is a thorough update of federal and state computer crime laws, as well as changes in penalties for illegal computer hacking.

CIS 220 Advanced Spreadsheet Design

3 Hours

Prerequisites: CIS 104

4 hours weekly (2-2)

This course is a continuation of CIS 104 and builds upon basic design skills. It provides the student with an opportunity to develop advanced techniques in the design of business applications. Advanced study of special mathematics, logical, and database statistical functions will provide the foundation for advanced program design. Problem solving for managerial and accounting decision making is emphasized, and design techniques incorporating the use of macros, menu layout, and data transfer are included using Microsoft Excel. This course will help the student prepare to take the Microsoft Certified Application Specialist Exam.

CIS 225 Advanced Data Base Management

3 Hours

Prerequisites: CIS 120

4 hours weekly (2-2)

This course is a continuation of CIS 120. The concepts needed to develop and maintain a database system at an advanced level will be emphasized. Items that will be covered are: advanced query manipulation, table linking, macro programming, planning and creating a switchboard application as well as applying custom toolbars. Business simulated projects will be a major part of the curriculum. Upon completion of this course, the student should be prepared to take the Microsoft Certification exam.

CIS 229 Digital Forensics

3 Hours

Prerequisites: CIS 209 with a grade of "C" or higher

4 hours weekly (2-2)

Provides an introduction to Digital Forensics from a theoretical and practical perspective and an introduction to investigative tools and techniques used in the field. Personal computer operating system architectures and disk structures are reviewed and the proper use of available computer forensic hardware and software tools are examined. Other topics include the importance of digital evidence controls, the method of processing crime and incident scenes, the details of data acquisition, and the requirements of an expert witness. The course provides a range of laboratory and hands-on activities and assignments that emphasize both the theory and the practical application of computer forensic investigations.

CIS 230 Operating Systems

3 Hours

Prerequisites: None

4 hours weekly (2-2)

Students will learn important concepts about operating systems while applying skills and knowledge to support computers in a business environment or an IT position. Students will also learn the theory and technical information professionals need as they work with today's popular operating systems, such as Windows and UNIX/Linux platforms. Topics include operating system theory, installation, upgrading, configuring, (operating system and hardware), file systems, security, hardware options, and storage, as well as resource sharing, network connectivity, maintenance, and troubleshooting. This course prepares

students to understand the fundamental concepts of today's computer operating systems.

CIS 231 Firewalls and VPNs

3 Hours

Prerequisites: CIS 230 with a grade of "C" or higher

4 hours weekly (2-2)

This course examines the major network security tools in use today, with the idea that firewalls are most effective when backed by thoughtful security planning, well-designed security policies, and integrated support from anti-virus software, intrusion detection systems, and related tools. Coverage includes packet filtering, authentication, proxy servers, encryption, bastion hosts, virtual private networks (VPNs), log file maintenance, and intrusion detection systems. The course will provide numerous realistic projects and cases incorporating cutting-edge technology and current trends, giving students the opportunity to hone and apply the knowledge and skills they will need as working professionals. Students will also learn about relevant National Institute Standards and Technology guidelines that are used by businesses and information technology professionals.

CIS 270 Cisco II
4 Hours
Prerequisites: CIS 170 with a grade of "C" or higher
4 hours weekly (3-2)
The CCNA R&S certification validates the ability to install, configure, operate, and troubleshoot medium-size routed and switched networks. CCNA certified professionals have the knowledge and skills to make connections to remote sites via a WAN, and mitigate basic security threats. CCNA R&S training covers (but is not limited to) the use of these topics: IOS, IPv6, IPv4, OSPF, Cisco Licensing, Enhanced Interior Gateway Routing Protocol (EIGRP), Serial Line Interfaces, Frame Relay interfaces VLANs, Ethernet, VLSM, and basic traffic filtering.