Computer Information Systems

**CIS 110 Introduction to Computers**
Prerequisites: ENG 095, ENG 095A
Corequisites: None
This course introduces computer concepts, including fundamental functions and operations of the computer. Topics include identification of hardware components, basic computer operations, security issues, and use of software applications. Upon completion, students should be able to demonstrate an understanding of the role and function of computers and use the computer to solve problems. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural science/mathematics (Quantitative Option). This course is also available through the Virtual Learning Community (VLC).*

**CIS 111 Basic PC Literacy**
Prerequisites: None
Corequisites: None
This course provides an overview of computer concepts. Emphasis is placed on the use of personal computers and software applications for personal and fundamental workplace use. Upon completion, students should be able to demonstrate basic personal computer skills. *This course is also available through the Virtual Learning Community (VLC).*

**CIS 113 Computer Basics**
Prerequisites: None
Corequisites: None
This course introduces basic computer usage for non-computer majors. Emphasis is placed on developing basic personal computer skills. Upon completion, students should be able to demonstrate competence in basic computer applications. *This course is also available through the Virtual Learning Community (VLC).*

**CIS 115 Intro to Program & Logic**
Prerequisites: MAT 070, MAT 080, MAT 090, MAT 095, MAT 120, MAT 121, MAT 161, MAT 171, or MAT 175
Corequisites: None
This course introduces computer programming and problem solving in a structured program logic environment. Topics include language syntax, data types, program organization, problem solving methods, algorithm design, and logic control structures. Upon completion, students should be able to manage files with operating system commands, use top-down algorithm design, and implement algorithmic solutions in a programming language. *This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural science/mathematics (Quantitative Option). This course is also available through the Virtual Learning Community (VLC).*

**CSC 139 Visual BASIC Programming**  
Prerequisites: CIS 115  
Corequisites: None  
This course introduces computer programming using the Visual BASIC programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test and debug at a beginning level. *This course is also available through the Virtual Learning Community (VLC). This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement.* (TAC – 05/24/06)

**CSC 151 JAVA Programming**  
Prerequisites: CIS 115  
Corequisites: None  
This course introduces computer programming using the JAVA programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a premajor and/or elective course requirement*

**Computer Information Technology**

**CTS 120 Hardware/Software Support**  
Prerequisites: CIS 110 or CIS 111  
Corequisites: None  
This course covers the basic hardware of a personal computer, including installation, operations and interactions with software. Topics include component identification, memory-system, peripheral installation and configuration, preventive maintenance, hardware diagnostics/repair, installation and
optimization of system software, commercial programs, system configuration, and device-drivers. Upon completion, students should be able to select appropriate computer equipment and software, upgrade/maintain existing equipment and software, and troubleshoot/repair non-functioning personal computers.

**CTS 130 Spreadsheet**
Prerequisites: CIS 110 or CIS 111 or OST 137
Corequisites: None

This course introduces basic spreadsheet design and development. Topics include writing formulas, using functions, enhancing spreadsheets, creating charts, and printing. Upon completion, students should be able to design and print basic spreadsheets and charts.

**CTS 285 Systems Analysis & Design**
Prerequisites: CIS 115
Corequisites: None

This course introduces established and evolving methodologies for the analysis, design, and development of an information system. Emphasis is placed on system characteristics, managing projects, prototyping, CASE/OOM tools, and systems development life cycle phases. Upon completion, students should be able to analyze a problem and design an appropriate solution using a combination of tools and techniques.

**CTS 289 System Support Project**
Prerequisites: CTS 285
Corequisites: None

This course provides an opportunity to complete a significant support project with minimal instructor assistance. Emphasis is placed on written and oral communication skills, project definition, documentation, installation, testing, presentation, and user training. Upon completion, students should be able to complete a project from the definition phase through implementation.

**Database Administration**

**DBA 110 Database Concepts**
Prerequisites: CIS 110, CIS 111, OR CIS 115
Corequisites: None

This course introduces database design and creation using a DBMS product. Emphasis is placed on data dictionaries, normalization, data integrity, data modeling, and creation of simple tables, queries, reports, and forms. Upon
completion, students should be able to design and implement normalized database structures by creating simple database tables, queries, reports, and forms.

**Networking Technology**

**NET 125 Networking Basics**
Prerequisites: None
Corequisites: None
This course introduces the networking field. Emphasis is placed on network terminology and protocols, local-area networks, wide-area networks, OSI model, cabling, router programming, Ethernet, IP addressing, and network standards. Upon completion, students should be able to perform tasks related to networking mathematics, terminology, and models, media, Ethernet, subnetting, and TCP/IP Protocols.

**Networking Operating System**

**NOS 110 Operating Systems Concepts**
Prerequisites: CIS 110
Corequisites: None
This course introduces students to a broad range of operating system concepts, including installation and maintenance. Emphasis is place on operating system concepts, management, maintenance, and resources required. Upon completion of this course, students will have an understanding of OS concepts, installation, management, maintenance, using a variety of operating systems.

**NOS 120 Linux/UNIX Single User**
Prerequisites: NOS 110
Corequisites: None
This course develops the necessary skills for students to develop both GUI and command line skills for using and customizing a Linux workstation. Topics include Linux file system and access permissions, GNOME Interface, VI editor, X Window System expression pattern matching, I/O redirection, network and printing utilities. Upon completion, students should be able to customize and use Linux systems for command line requirements and desktop productivity roles.

**NOS 130 Windows Single User**
Prerequisites: NOS 110
Corequisites: None
This course introduces operating system concepts for single-user systems. Topics include hardware management, file and memory management, system configuration/optimization and utilities. Upon completion, students should be able to perform operating systems functions at the support level in a single user.
NOS 230 Windows Administration  
Prerequisites: NOS 130  
Corequisites: None  
This course covers the installation and administration of a Windows Server network operating system. Topics include managing and maintaining physical and logical devices, access to resources, the server environment, managing users, computers, and groups, and Managing/Implementing Disaster Recovery. Upon completion, students should be able to manage and maintain a Windows Server environment.

NOS 110 Operating System Concepts  
Prerequisites: CIS 110  
Corequisites: None  
This course introduces students to a broad range of operating system concepts, including installation and maintenance. Emphasis is placed on operating system concepts, management, maintenance, and resources required. Upon completion of this course, students will have an understanding of OS concepts, installation, management, maintenance, using a variety of operating systems.

NOS 120 Linux/UNIX Single User  
Prerequisites: NOS 110  
Corequisites: None  
This course develops the necessary skills for students to develop both GUI and command line skills for using and customizing a Linux workstation. Topics include Linux file system and access permissions, GNOME Interface, VI editor, X Window System expression pattern matching, I/O redirection, network and printing utilities. Upon completion, students should be able to customize and use Linux systems for command line requirements and desktop productivity roles.

NOS 130 Windows Single User  
Prerequisites: NOS 110  
Corequisites: None  
This course introduces operating system concepts for single-user systems. Topics include hardware management, file and memory management, system configuration/optimization, and utilities. Upon completion, students should be able to perform operating systems functions at the support level in a single user environment.
NOS 230 Windows Administration  
Prerequisites: NOS 130  
Corequisites: None  
This course covers the installation and administration of a Windows Server network operating system. Topics include managing and maintaining physical and logical devices, access to resources, the server environment, managing users, computers, and groups, and Managing/Implementing Disaster Recovery. Upon completion, students should be able to manage and maintain a Windows Server environment.

Information Security

SEC 110 Security Concepts  
Prerequisites: NET 125  
Corequisites: None  
This course introduces the concepts and issues related to securing information systems and the development of policies to implement information security controls. Topics include the historical view of networking and security, security issues, trends, security resources, and the role of policy, people, and processes in information security. Upon completion, students should be able to identify information security risks, create an information security policy, and identify processes to implement and enforce policy.

Web Technology

WEB 110 Internet/Web Fundamentals  
Prerequisites: MAT 070, ENG 095, ENG 095A  
Corequisites: None  
This course introduces World Wide Web Consortium (W3C) standard markup language and services of the Internet. Topics include creating web pages, search engines, FTP, and other related topics. Upon completion, students should be able to deploy a hand-coded website created with mark-up language, and effectively use and understand the function of search engines. This course is also available through the Virtual Learning Community (VLC).

WEB 111 Intro to Web Graphics  
Prerequisites: None  
Corequisites: None  
This course introduces the creation of web graphics, and addressing problems peculiar to WWW display using appropriate software. Topics include web graphics file types, optimization, RGB color, web typography, elementary special effects, transparency, animation, slicing, basic photo manipulation, and other related topics. Upon completion, students should be able to create graphics, such as animated banners, buttons, backgrounds, logos, and manipulate photographic images for Web delivery.
**WEB 120 Intro. to Internet Multimedia**
Prerequisites: None  
Corequisites: None  
This is the first of two courses covering the creation of internet multimedia. Topics include internet multimedia file types, file type conversion, acquisition of digital audio/video, streaming audio/video and graphics animation plug-in programs and other related topics. Upon completion, students should be able to create internet multimedia presentations utilizing a variety of methods and applications.

**WEB 140 Web Development Tools**
Prerequisites: None  
Corequisites: None  
This course provides an introduction to web development software suites. Topics include the creation of web sites and applets using web development software. Upon completion, students should be able to create entire web sites and supporting applets