

# Computer Information Technology (CIT)

## (Computer Science & Technology Department)

### **CIT 100—Computer Literacy**

3 lect., 3 cr. (Fall/Spring)

This course is designed to give the student an overview of computer technology, concepts, terminology, and the role of computers in society. There will be discussions of the social and ethical issues related to computers and the Internet. It will provide the student with research and critical thinking skills and introduce the student to relevant emerging technologies. The student will use word-processing, spreadsheets, database and presentation software when presenting their findings.

Prerequisite: Successful completion (DVP) of MAT 010 or MAT 040 or math placement into MAT 020 or MAT 092 or higher

### **CIT 101—Microcomputer Applications**

3 cr.

(For Business majors see BUS 161 Computer Applications for Business)

### **CIT 103—Management Information Systems**

3 lect., 3 cr. (Fall)

An introductory course in Management Information Systems that includes such topics as organization and dissemination of business information, fundamentals of a computer system, storage and retrieval devices, the systems development life cycle, the Internet, and E-Commerce. Coverage will also include security, privacy and ethical issues as they relate to information systems.

### **CIT 105—Data Communications and Introduction to Networking**

2 lect., 2 lab, 3 cr. (Fall)

This is an introductory course in data communications and networking. Topics, which are emphasized in this course, include communication mediums, communication equipment, network topologies, protocols, and the OSI model.

Prerequisite: Successful completion (DVP) of MAT 020 or MAT 040 Or placement into MAT 092 or higher

### **CIT 107—Introduction to C++ Programming**

2 lect., 2 lab, 3 cr. (Fall)

This course involves classroom lectures and hands-on exposure to programming in C++. Topics include: Fundamental features of C++. Operators, Arrays and Loops, Pointers, Control Statements, Disk Files and Libraries, Structures for Lists, Sorting and Searching.

Prerequisite: Successful completion (DVP) of MAT 020 or MAT 040 or placement into MAT 092 or higher

### **CIT 111—Internet and HTML**

2 lect., 2 lab, 3 cr. (Fall/Spring)

This is a computer-based course which introduces the student to the Internet and Internet programming. The student will cover topics including, general concepts, terminology, search engines, web page design and Internet languages. Assignments provide experience in the use of the Internet and creating web pages, an introduction to Dreamweaver.

### **CIT 112—Computer Hardware and Software**

3 lect., 3 lab, 4 cr. (Spring)

This course involves classroom lectures and hands-on exposure to advanced microcomputer software and hardware. Topics include: current hardware technology, microcomputer operating systems, fixed disk management, communications, and local area networks.

Prerequisite: Successful completion (DVP) of MAT 020 or MAT 040 or placement into MAT 092 or higher

### **CIT 115—Visual Basic**

2 lect., 2 lab, 3 cr.

This is a hands-on computer programming course to introduce the student to the Visual Basic programming language. The student will use important programming tools such as flowcharting, pseudo code, testing data and testing modules and will learn how to use Visual Basic for both stand-alone programs and scripting modules for use on the Internet. Entering students should have a basic knowledge of microcomputers and Windows.

Prerequisite: MAT 020 or MAT 040 placement into MAT 101 or MAT 092 or higher

### **CIT 116—Networking 1**

3 lect., 3 lab, 4 cr. (Spring)

This course will introduce students to the organization and design of networks. It contains the background information students would need to take the first part of the CCNA certification, however, certification preparation is not included in this course. Topics include

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networking media, networking topologies, the OSI reference model, TCP/IP protocol suite, subnets, routers, switches, and basic networking concepts. Students will learn industry standards and terminology.

Prerequisite: CIT 105

### **CIT 117—Introduction to Unix/Linux**

2 lect., 2 lab, 3 cr. (Fall/Spring)

This is a computer-based course that will introduce the student to the UNIX and LINUX operating system. Assignments will include installation, basic operation, file management, administration, and configuration of LINUX. Various editions of UNIX/LINUX will be discussed. Students may wish to use this course to prepare for the CompTIA Linux+ certification.

Prerequisite: Successful completion (DVP) of MAT 020 or MAT 040 or placement into MAT 092 or higher

### **CIT 118—Operating Systems**

3 lect., 3 lab, 4 cr.

This course is an overview of microcomputer operating systems, which includes installation, configuration, maintenance, and efficiency. Installation and management of peripheral devices such as hard disk, USB flash drives, floppy drives, printers, and monitors will be covered. Customizing the operating system environments, troubleshooting, evaluating system performance, and system utilities of operating systems are also covered. Both client and server operating systems will be discussed including but not limited to Microsoft Windows (Server, XP, and Vista), Linux, and DOS. Students will learn industry standards and terminology.

Prerequisite: CIT 100

### **CIT 203—Networking 2**

3 lect., 3 lab, 4 cr. (Fall)

This course builds on the foundation developed in CIT 116 Networking 1 and extends the student's capability to understand and manage data networks. It contains the background information students would need to take the second part of the CCNA certification; however, certification preparation is not included in this course. Topics include LAN and WAN design, VLANs, Frame Relay, ISDN, and network administration. Students will learn industry standards and terminology.

Prerequisite: CIT 116

### **CIT 206—Networking Security**

2 lect., 2 lab, 3 cr. (Spring)

This course is an introduction to networking security, which includes securing an organization's critical data and systems from both internal and external threats. It contains the background information students would need to take the CompTIA's Security+ certification; however, certification preparation is not included in this course. Topics include general security concepts, security threats, authentication, attacks, malicious code, remote access, email considerations, and web security. Students will learn industry standards and terminology.

Prerequisite: CIT 116

### **CIT 208—Flash Programming**

2 lect., 2 lab, 3 cr. (Spring)

This course introduces the student to Macromedia Flash, which allows the student to add animations, special effects, sound and much more to their Web Pages. The student will learn how to create Flash objects. Assignments will provide experience in the use of Macromedia Flash.

Prerequisite: CIT 111, Successful completion (DVP) of MAT 020 or MAT 040 or placement into MAT 092 or higher

### **CIT 211—Systems Analysis**

3 lect., 3 cr. (Fall)

Emphasis is placed on feasibility studies and analysis of new system requirements. A semester-long project is required to be completed by small groups working outside of the classroom. The group is required to present a written and oral presentation at the end of the semester.

Prerequisite: CIT 103, Successful completion (DVP) of MAT 020 or MAT 040 or placement into MAT 092 or MAT 101 or higher; prerequisite or concurrent enrollment in CIT 225

### **CIT 212—Systems Design**

2 lect., 2 lab, 3 cr. (Spring)

Emphasis is placed on designing a new system: file organization, hardware selection, programming specifications, installation requirements and follow-up procedures. A Case project is required to be completed by small groups. The Case Project will require a written and oral presentation at the end of the semester.

Prerequisite: CIT 211 and CIT 225

### **CIT 215—Web Site Management**

2 lect., 2 lab, 3 cr. (Spring)

This course introduces the student to web site management. The student will learn how to identify a project, build a team, plan the project, and develop a design. Assignments provide experience in management of projects, people, and process.

Prerequisite: Successful completion (DVP) of MAT 020 or MAT 040 or placement into MAT 092 or higher

Pre/corequisite: CIT 111

**CIT 216—Internet Security**

2 lect., 2 lab, 3 cr. (Spring)

This is a computer-based course which introduces the student to security issues as well as programming secure applications for the Internet. The student will cover topics including, general concepts, terminology, Java security, Servlet and JSP security, cryptography, and security for web services. Assignments provide experience in the use of the scripting/programming languages to build secure enterprise infrastructure containing Java-based enterprise applications.

Pre/corequisite: CIT 205

**CIT 217—Introduction to Unix/Linux**

2 lect., 2 lab, 3 cr. (Fall/Spring)

This is a computer-based course that will introduce the student to the UNIX and LINUX operating system. Assignments will include installation, basic operation, file management, administration, and configuration of LINUX. Various editions of UNIX/LINUX will be discussed. Students may wish to use this course to prepare for the CompTIA Linux+ certification.

Prerequisite: MAT 020 or placement into MAT 101 or higher

**CIT 218—Systems Analysis and Design**

2 lect., 2 lab, 3 cr. (Fall)

This course investigates the development of contemporary information systems. Emphasis is placed on feasibility studies and analysis of new system requirements, designing a new system, hardware selection, programming specifications, installation requirements and follow-up procedures. A Case project is required to be completed by small groups. The Case Project will require a written and oral presentation at the end of the semester.

Prerequisite: Successful completion (DVP) of MAT 020 or MAT 040 or placement into MAT 092 or higher.

Pre/corequisite: CIT 225

**CIT 225—Database Fundamentals and Design**

2 lect., 2 lab, 3 cr. (Fall)

This course presents fundamental concepts of database design. Topics include input/output processing, file organization, relational database requirements, SQL, QBE, switchboard/menu design, applications development, data security, and automating tasks with macros. This course involves a semester-long group project.

Prerequisite: Pre/Corequisite of either CIT 103 or CIT 105 or CIT 117, Successful completion (DVP) of MAT 020 or MAT 040 or placement into MAT 092 or higher

**CIT 228—System Administration**

2 lect., 2 lab, 3 cr. (Spring)

Introduces the students to Windows and Linux system administration and related topics, including installation, configuration, user management, file system management and security, hardware configuration, network configuration, firewalls, monitoring, and application installations. Students will participate in lecture as well as hands on labs to gain practical knowledge in various aspects of day to day system administration.

Prerequisite: CIT 117 (formerly CIT 217)

**CIT 230—CIT Internship**

3 cr. (Spring)

Students are assigned to a work study experience in an appropriate technology field at an off-campus site or provided with on-campus project work. The particular interests of the student in the field are considered in arranging the field experience. Enrollment by permission of the department chair.