Information Technology (IT)

Courses

IT 1100. Introduction to Unix/Linux. 3 Hours.
Required of all Computer and Information Technology majors, and open to students with a general interest in computer operating systems. Introduces operating system concepts, including file systems, process management, user management, and security. Students will install and configure LINUX and MAC OSX. Course fee required. FA, SP.

IT 1200. A+ Computer Hardware/Windows OS. 3 Hours.
This course covers installation, repair, and maintenance of computer hardware. It also discusses installation, repair and maintenance of the Microsoft Windows operating system. This course prepares the student to take the CompTIA A+ certification exams. Dual listed with CJ 2500 (students may take only one course for credit). Course fee required. FA, SP.

IT 2400. Intro to Networking. 3 Hours.
Required of all Computer Science and Computer and Information Technology majors, and open to students with a general interest in computer networking. Introduces fundamental concepts of computer networks, including physical, transport, and application layers through completion of assignments predicting and measuring the behavior of computer networks under various conditions. Course fee required. Prerequisite: IT 1100 (Grade C- or higher). FA, SP.

IT 3100. Systems Design and Administration I. 3 Hours.
Required of Computer and Information Technology majors and students with an emphasis in Information Technology. Covers system administration topics for managing Internet facing services, including DNS, SMTP, and HTTP. Students will install, configure, and test services in a server environment. Course fee required. Prerequisites: CS 1400 (Grade C- or higher); AND IT 2400 (Grade C- or higher). FA.

IT 3110. Systems Design and Administration II. 3 Hours.
Required of students pursuing an emphasis in Information Technology, and open to Computer & Information Technology and Computer Science students. A continuation of IT 3100, course covers administration topics for managing local network services, including file sharing and user profile sharing in heterogeneous computer networks. Students will install, configure, and test services in a server environment. Course fee required. Prerequisite: IT 3100 (Grade C- or higher). SP.

IT 3150. Windows Servers. 3 Hours.
Students will learn Windows’s server management techniques to support a small to medium-sized business. Topics covered will include DHCP, DNS, IT, Windows Roles, Workgroups, Active Directory, and Domain Management. File and printer sharing will also be discussed. Course fee required. Prerequisites: IT 1200 and IT 2400 (both Grade C- or higher). SP.

IT 3300. Virtualization. 3 Hours.
Full Operating System virtualization as well as container or application virtualization topics will be covered. Automated deployment using configuration files. Management topics such as load-balancing, auto-failover, and high availability will also be discussed. Prerequisite: IT 2400 (Grade C- or higher). FA.

IT 4100. Files Systems and Storage Technologies. 3 Hours.
Classic, virtualized, and cloud storage will be covered. Topics such as RAID, NAS, SAN will be covered. Business continuity for backup and replication of storage. Local vs. Remote file systems. We will explore older and newer OS filesystems and compare them (such as fat32, nfs, ext3, ext4, btrfs). Prerequisite: IT 3100 (Grade C- or higher). SP (even).

IT 4200. Advanced Web Delivery. 3 Hours.
Required of students pursuing an Information Technology emphasis, and open to other interested students. Covers advanced web server configuration, management, and optimization necessary to provide web application delivery environments. Course fee required. Prerequisite: IT 3100 (Grade C- or higher). FA.

IT 4300. Database Design & Management. 3 Hours.
Required of students pursuing an Information Technology emphasis. Covers administration of database management systems, logical database design, implementation of database designs, and application development using a DBMS. Students will design, manage, and implement databases and applications that use databases. Dual listed with CS 4307 (students may take only one course for credit). Course fee required. Prerequisites: CS 1400 (Grade C- or higher); AND IT 1100 (Grade C- or higher). FA.

IT 4310. Database Administration. 3 Hours.
This course covers the database architecture and environment. Students will be able to manage user access control. Students will be able to perform backup, restore, and recovery operations. Students will be able control performance and optimization issues. It covers updating and upgrading of a database system. Students will be able to perform the importing and exporting of data to/from a database. Dual listed with CS 4310 (only one course may be taken for credit). Prerequisites: CS 1400 (Grade C- or higher); AND IT 3100 (Grade C- or higher). SP.

IT 4400. Network Design & Management. 3 Hours.
Required of students pursuing an Information Technology emphasis. Covers the design, management, and monitoring of a network. Hands-on configuration experience of layers 1, 2, and 3 will be given on both LAN and WAN levels. The successful student will be prepared to successfully complete the CCNA exam. Course fee required. Prerequisite: IT 2400 (Grade C- or higher). FA.

IT 4500. Information Security. 3 Hours.
Required of students pursuing an Information Technology emphasis. Reviews current security exploits, vulnerabilities, and counter measures. Covers general security models and architectures, encryption and forensics. Course fee required. Prerequisites: CS 1400 (Grade C- or higher); AND IT 3100 (Grade C- or higher). SP.
IT 4600. Senior Project. 3 Hours.
Required of students pursuing an Information Technology emphasis. Students will complete an aggressive information technology project. Course fee required.
Prerequisite: Senior status. SP.

IT 4920R. Internship. 1-3 Hours.
Internship course in Information Technology. Course fee required. Variable credit 1.0 - 3.0. Repeatable up to 3 credits subject to graduation restrictions. Prerequisite: Instructor permission. Offered by arrangement.

IT 4990. Seminar in Inform Technology. 3 Hours.
For students wishing instruction that is not available through other regularly scheduled courses in this discipline. Occasionally, either students need some type of non-traditional instruction, or an unanticipated opportunity for instruction presents itself. This course may include standard lectures, travel and field trips, guest speakers, laboratory exercises, or other nontraditional instruction methods. Repeatable for credit as topics vary, up to 12 credits. Course fee required. Prerequisite: Advanced standing. Offered by arrangement.

IT 4991. Seminar in Information Technology. 0.5-3 Hours.
For students wishing instruction that is not available through other regularly scheduled courses in this discipline. Occasionally, either students request some type of non-traditional instruction, or an unanticipated opportunity for instruction presents itself. This seminar course provides a variable credit context for these purposes. As requirements, this seminar course must first be pre-approved by the department chair; second, it must provide at least nine contact hours of lab or lecture for each credit offered; and third, it must include some academic project or paper (i.e., credit is not given for attendance alone). This course may include standard lectures, travel and field trips, guest speakers, laboratory exercises, or other nontraditional instruction methods. Note that this course is an elective and does not fulfill general education or program requirements. Fees may be required for some seminar courses and instructor permission will be optional at the request of the instructor.