

TECHNOLOGY INTEGRATION (TECI)

Courses

TECI 111 Healthcare Data Management and Information Systems 3 Credits

Introduction to the electronic health record (EHR) components and health informatics including infrastructure, privacy, security, and legal implications. Federal involvement and its impact on information technology regarding health data will be discussed. The transformation of data into meaningful information, through research, vital statistics, and epidemiology will be demonstrated. Data quality, integrity, collection, access, and retention will also be emphasized.

Fees: Yes.

TECI 118 AC Passive Circuits 3 Credits

Analysis of AC circuits including resistors, capacitors, inductors, and use of standard test equipment. Three one-hour lectures and one one-and-one-half hour laboratory per week.

Corequisites: TECI 118L.

TECI 118L AC Passive Circuits Laboratory 1 Credit

Lab component required for TECI 118.

Corequisites: TECI 118.

TECI 120 A+ Certification Preparation 3 Credits

Personal computer hardware, networking concepts, operational procedures, and troubleshooting for a successful entry-level computer service technician position. Provides extensive hands-on work with computer systems, PC setup and configuration, and basic maintenance and troubleshooting. Preparation for the first CompTIA A+ Exam.

Terms Typically Offered: Fall, Spring.

Fees: Yes.

TECI 131 Principles of Information Assurance (Security+ Prep) 3 Credits

Skills and knowledge associated with protecting information assets, determining the levels of protection and response to security incidents, and designing a consistent, reasonable information security system. Students learn to inspect and protect information assets, detect and react to threats to information assets, and examine pre- and post-incident procedures.

Terms Typically Offered: Fall.

Fees: Yes.

TECI 132 Introduction to IT Hardware and System Software 3 Credits

Basic hardware and software study of stand-alone or local/wide-area computers. Hands-on experience using 5x or above architecture.

Terms Typically Offered: Fall, Spring.

Fees: Yes.

TECI 142 Internet of Things 3 Credits

Introduction to the Internet of Things (IoT), the aggregate collection of network-enabled devices, excluding traditional computers. Network connections include Wi-Fi connections, Bluetooth connections, and near-field communication. The IoT includes "smart" appliances, home security systems, computer peripherals, wearable technology, routers, and smart speaker devices. Topics include understanding how the IoT bridges the gap between operational and information technology systems.

Terms Typically Offered: Spring.

Fees: Yes.

TECI 163 Convergent Technologies 3 Credits

Introduction to telecommunications, including how data, voice, and video technologies are converging for telecommunications systems. Topics will also include wireless, ISDN, PCM, DSL, cable, IP voice, and computer networks.

TECI 170 Introduction to Communications 3 Credits

Overview of communication systems that include both central office based and premise based platforms. The switching and service components of RBOC and inter-exchange providers will be examined and discussed. Characteristics, advantages, and disadvantages of the various systems will be compared and contrasted. Architecture and design of switching infrastructures and components will also be covered.

TECI 180 Cisco Networking I 3 Credits

Foundation for the Cisco Certified Network Associate (CCNA) certification. Introduces the architecture, structure, functions, components, and models of the internet and other computer networks. Includes principles and structure of Internet Protocol (IP) addressing and the fundamentals of ethernet concepts, media, and operations. This is the first of three semester-long courses at Cisco NetAcad when pursuing the CCNA.

Terms Typically Offered: Fall, Spring.

Fees: Yes.

TECI 185 Cisco Networking II 3 Credits

Second of four semester courses in Cisco's Networking Academy curriculum. Concepts covered are: safety; networking; network terminology and protocols; network standards; LANs, MANs, SANs, WANs; OSI model; ethernet; token ring; FDDI; TCP/IP addressing protocol; dynamic routing; and the network administrator's role and function.

Prerequisites: TECI 180.

Terms Typically Offered: Fall.

Fees: Yes.

TECI 195 Independent Study 1-4 Credits

Course may be taken multiple times up to maximum of 6 credit hours.

TECI 196 Topics: 1-3 Credits

Course may be taken multiple times up to maximum of 15 credit hours.

TECI 201 Linux Configuration (OS) 3 Credits

Installation of a Linux operating system (OS). Configure and manage OS using command line interface (CLI) and text editor. Topics include: installation and configuration of updates, services, file system, users and groups, file and folder permissions, networking, and remote access.

Terms Typically Offered: Fall.

Fees: Yes.

TECI 202 Unix/Linux Server Administration 3 Credits

Knowledge and skills required to configure, administer and secure data, users and services in a UNIX or Linux server environment. Emphasis will be on command-line interface (CLI). Topics will also include system monitoring, performance tuning, troubleshooting and interoperability with Windows servers and clients.

Terms Typically Offered: Fall, Spring, Summer.

TECI 211 Windows Configuration (OS) 3 Credits

Knowledge and skills necessary to address the implementation and desktop support needs of customers who are planning to deploy and support Microsoft Windows Client OS in a variety of network operating system environments.

Terms Typically Offered: Spring.

Fees: Yes.

TECI 230 Cisco Networking III 3 Credits

Third of four semester courses in Cisco's Networking Academy curriculum. Concepts covered are: LAN switching; VLANs; LAN design; IGRP; access lists; and IPX/SPX. Concepts applied through design of a threaded case study (TCS).

Prerequisites: TECI 180 and TECI 185.

Terms Typically Offered: Spring.

Fees: Yes.

TECI 235 Cisco Networking IV 3 Credits

The fourth of four semester courses in Cisco's Networking Academy curriculum. Concepts covered are: WANs, SANs design; PPP; ISDN; Frame relay; Master documentation skills; with concepts applied through design of a Threaded Case Study (TCS).

Prerequisites: TECI 180, TECI 185, and TECI 230.

TECI 240 VoIP Fundamentals 3 Credits

Covers the components of engineering the telephone outside plant, fundamentals of transmission, resistance design, and distribution cable design in serving a customer area.

TECI 242 Cloud Computing 3 Credits

Introduction to cloud computing and how to install, configure, and manage a cloud environment. Builds on knowledge of hypervisor and virtual machine environments.

Terms Typically Offered: Spring.

Fees: Yes.

TECI 243 Hybrid Servers Integration 3 Credits

Introduction to server and networking foundational concepts that bridge the gap as students are introduced to on-premises Windows server management and cloud integration in a hybrid environment.

Terms Typically Offered: Fall.

Fees: Yes.

TECI 244 Windows Automation and Management Program 3 Credits

Introduction to command-line shell and scripting language tailored for task automation and configuration management across different platforms. Unlock remote capabilities, enabling the execution of commands on distant systems directly from a local machine.

Terms Typically Offered: Spring.

Fees: Yes.

TECI 245 Security Fundamentals 3 Credits

Comprehensive overview of network security. Includes general security concepts. Communication security includes remote access, e-mail, the Web, directory and file transfer, and wireless data. Common network attacks introduced. Cryptography basics incorporated. Operational/organizational security discusses as it relates to physical security, disaster recovery, and business continuity. Computer forensics introduced.

TECI 257 Network Defense and Counter Measures (CySA+ Preparation) 4 Credits

Examination of tools and technologies in the technical securing of information. Provides in-depth information about software and hardware components of Information Security and Assurance. Topics include: firewall configurations, hardening Unix and NT servers, Web and distributed systems security, and specific implementation of security modes and architectures. Curriculum maps to the Security Certified Network Professional (SCP) Network Defense and Countermeasures exam.

Prerequisites: TECI 131.

Terms Typically Offered: Fall, Spring.

Fees: Yes.

TECI 260 Information Technology Hardware and System Software 3 Credits

Use of an internal systems approach to building and maintaining stand-alone or local/wide area computers utilized in networking. Hands on experience using 5x or above architecture.

TECI 265 Advanced IT Hardware and System Software 3 Credits

Windows Domain Management and Windows Deployment. Introduces Microsoft Deployment Toolkit (MDT) to accelerate and automate deployments of Windows 8, Windows Server 2012, Windows 7, Office 2010, and Windows Server 2008 R2. MDT provides a common console with comprehensive tools and guidance for every organizational role. Recommended process and toolset to automate large-scale desktop and server deployments.

Prerequisites: TECI 260.

TECI 270 Cisco Cybersecurity Operations Fundamentals (CBROPS) 4 Credits

Core and advanced security concepts and skills for Cisco networks.

Prerequisites: TECI 180 and TECI 185.

Terms Typically Offered: Spring.

Fees: Yes.

TECI 292 Capstone in Technical Engineering Planning and Economics 4 Credits

Knowledge to articulate the tactical planning functions performed within capacity provisioning. Access and apply the various tactical planning tools and data elements to supporting documentation. Economic principles in costing, value, capital investment, profitability and inventory.

TECI 295 Independent Study 1-3 Credits

Course may be taken multiple times up to maximum of 6 credit hours.