

IT-NETWORKING & INFO SECURITY (150)

150-113 Computer Forensics

Credits: 3

This is a lecture/hands-on course designed to teach students desktop and server hardware fundamentals. Topics include: hardware identification and specifications, basic desktop/server setup, installation of desktop/server operating systems, manual installation of driver software, and desktop/server hardware installation and troubleshooting.

Aid Code: 10 - Associate Degree.

Complete Course Listing

150-117 Local Area Network Switching and Wireless

Credits: 3

LAN Switching and Wireless is a lecture/lab course in which students build multi-platform and multi-protocol networks. Topics include: IPv6, installation and configuration of VLANs, multi-layer switches, routers, interior gateway routing protocols, and enterprise wireless solutions.

Aid Code: 10 - Associate Degree.

Pre-requisites: 150-131

Complete Course Listing

150-118 Server and Data Center Virtualization

Credits: 3

Server and Data Center Virtualization is a lecture/lab course that will introduce advanced topics in server virtualization and SANs. Students will configure vNetwork standard switches, install and configure VMWare ESXi, manage shared storage, deploy virtual servers in an enterprise environment. They will also engage in the back up, recovery, and migration of virtual machines.

Aid Code: 10 - Associate Degree.

Pre-requisites: (150-127)

Co-requisites: (150-128)

Complete Course Listing

150-120 Configuring Desktop Operating Systems

Credits: 3

Configuring Desktop Operating Systems is a lecture/hands-on course designed to teach the configuration of desktop operating systems. Topics include operating system installation and troubleshooting, configuration, sharing and file system permissions, and users, groups, profiles, and policies. An introduction to the use of VMware Workstation is also provided to enable students further practice with operating system configurations learned in class.

Aid Code: 10 - Associate Degree.

Complete Course Listing

150-127 Introduction to Enterprise Virtualization

Credits: 3

This lecture/hands-on course concentrates on using Enterprise Virtualization and administering Network Operating Systems such as Windows Server. Topics include: enterprise virtualization, server administration, network administrator responsibilities, login security, file system security and design, Active Directory, user administration and client installation, configuration, troubleshooting, and print management.

Aid Code: 10 - Associate Degree.

Pre-requisites: 150-120

Complete Course Listing

150-128 Windows Enterprise Server Administration

Credits: 3

Windows Enterprise Server Administration is a lecture/lab course designed to introduce advanced Windows Server administration. The student will learn GPOs, Active Directory Design, DFS, Terminal Services, CA configuration, IIS, VPNs, DHCP, DNS, software deployment, PowerShell, and utilities like NTDSutil.

Aid Code: 10 - Associate Degree.

Pre-requisites: (150-127)

Co-requisites: (150-118)

Complete Course Listing

150-130 Introduction to Enterprise Networks

Credits: 3

Intro to Enterprise Networks is a lecture/hands-on lab course designed to introduce students to configuring protocols and devices needed for network communication. Topics covered include: OSI Reference Model; LAN/WAN topologies; cabling systems; access methods; protocols; ip addressing; introduction to various network clients; use of network devices (switches, routers); fundamentals of network design; and basic troubleshooting tools.

Aid Code: 10 - Associate Degree.

Complete Course Listing

150-131 Routers and Routing Protocols

Credits: 3

Routers and Routing Protocols is a lecture/lab course that is designed to introduce the student to routing and switching infrastructures, basic Cisco router and switch configurations, troubleshooting methodologies, OSI 7 layer concepts, integration of basic network components, and integration of desktop and server-based operating systems with infrastructure in an enterprise network.

Aid Code: 10 - Associate Degree.

Pre-requisites: (150-130) and (150-146)

Complete Course Listing

150-132 IT-Project Management

Credits: 3

This is a capstone project course, for second year students, that culminates the experience of the two-year program. The focus will be an integration of all of the networking skills acquired throughout the program with hands-on applications including problem-solving, troubleshooting, and technical documentation. Network troubleshooting, server design, network analysis, network design, security, recovery models, project management, network planning, and business models relating to computer networking and IT will be stressed.

Aid Code: 10 - Associate Degree.

Pre-requisites: (150-117) and (150-128) and (152-150)

Complete Course Listing

150-133 Network Security

Credits: 3

This course introduces learners to the fundamentals of network security. The course covers various topical areas involved in network security, including security topology, intrusion detection, device configurations, access lists, authentication, and encryption. Different methods of attacks, such as viruses, Trojan horses, and worms are also reviewed. This course also introduces wireless security concepts.

Aid Code: 10 - Associate Degree.

Pre-requisites: (150-130) and (150-151)

Complete Course Listing

150-134 Internetwork Security

Credits: 3

This course covers how to secure internetworked information systems (i.e., those connected by hubs, switches, routers, etc.), including defense against methods used by hackers to enter dedicated systems. Topics covered include confidentiality, integrity and reliability; user and group authentication; authorization and accounting; encryption replication; and security enhancement features.

Aid Code: 10 - Associate Degree.

Pre-requisites: (150-133) and (150-135)

Complete Course Listing

150-135 Operating Systems Security

Credits: 3

Students will cover the essentials of securing popular operating workstations and networks. Topics include authentication, group security, remote access security, security file resources, Internet Protocol security, and more. Active Directory and similar topics are also covered.

Aid Code: 10 - Associate Degree.

Complete Course Listing

150-136 Perimeter Security

Credits: 3

This course covers internetworked systems security management and configuration, integrated system security software, configuring network access servers for enhanced security, and an understanding of systems security support and management. Students will learn how to use Active Director, or a similar service, to create and maintain secure perimeters within a network.

Aid Code: 10 - Associate Degree.

Pre-requisites: 150-134

Complete Course Listing

150-139 Current Issues in Networking

Credits: 3

Current Issues & Trends is a course designed to cover a "hot" computer area. Possible topics include: advanced applications; object orientated programming; computer security; computer ethics; and Internet programming.

Aid Code: 10 - Associate Degree.

Complete Course Listing

150-140 Data and Control Structures

Credits: 3

Data and Control Structures is a lecture/hands-on course designed to teach students to think the way that the computer thinks and how data is stored and retrieved. Topics include: structured programming (i.e. sequence, selection, and iteration), database design, query building, form design, and report design.

Aid Code: 10 - Associate Degree.

Pre-requisites: 150-120

Complete Course Listing

150-141 Linux

Credits: 3

Linux is a lecture/hands on course designed to teach basic Linux commands and system administration. Linux desktop operating system installation, users, groups and file security will be examined. Linux server installation, configuration, troubleshooting and security topics will also be addressed.

Aid Code: 10 - Associate Degree.

Pre-requisites: 150-127

Complete Course Listing

150-142 Advanced Local Area Network/Wide Area Network Topics

Credits: 3

Advanced LAN/WAN Topics is a lecture/lab course. Topics include configuring and troubleshooting WAN protocols, BGP, QoS, HSRP, Secure Routing, RADIUS and TACACs Servers, VPNs, Firewalls, and Access-Lists.

Aid Code: 10 - Associate Degree.

Pre-requisites: 150-117

Complete Course Listing

150-143 Exchange and SQL Server

Credits: 3

Exchange and SQL Server is a lecture/hands-on course that is designed to introduce the student to Microsoft Exchange Server and Microsoft SQL Server Administration. Topics include: SQL Server installation, Exchange Server installation, Exchange and SQL configuration, managing the directory, managing distribution lists, managing information stores, writing advanced SQL queries, database design, normalization, and backing up and restoring Exchange and SQL Servers.

Aid Code: 10 - Associate Degree.

Pre-requisites: 150-128

Complete Course Listing

150-144 Introduction to Enterprise Networks-1**Credits:** 1

Intro to Enterprise Networks-1 is designed to introduce students to basic network concepts. Topics covered include basic terminology, the OSI Reference Model, network protocols, and an introduction to network device configuration.

Aid Code: 10 - Associate Degree.

Complete Course Listing

150-145 Introduction to Enterprise Networks-2**Credits:** 1

Intro to Enterprise Networks-2 is designed to introduce students to media types, network access methods, LAN/WAN topologies, and the basic function of routers and routing protocols.

Aid Code: 10 - Associate Degree.**Pre-requisites:** (150-144)

Complete Course Listing

150-146 Introduction to Enterprise Networks-3**Credits:** 1

Intro to Enterprise Networks-3 is designed to cover the basics of IP addressing, the fundamentals of network design, and basic network troubleshooting techniques.

Aid Code: 10 - Associate Degree.**Pre-requisites:** (150-145)

Complete Course Listing

150-151 Information Security Principles**Credits:** 3

This course will explore Information Security Principles as they relate to managing a computer network and securing business resources. Common threats to data confidentiality, integrity and availability will be discussed along with appropriate countermeasures.

Aid Code: 10 - Associate Degree.

Complete Course Listing

150-152 Information Systems Security Practicum**Credits:** 3

Students will typically work in the field, with an external enterprise, to learn how to develop a security vision statement, write simple but effective security guidelines, policies, and procedures that protect information, people, and property, and comply with legal and other requirements. Students will evaluate information and systems, assign ownership and responsibilities, and develop appropriate documentation.

Aid Code: 10 - Associate Degree.**Pre-requisites:** (150-151) and (801-195 or 801-136)

Complete Course Listing

150-153 Information Systems Security Management**Credits:** 3

Students will learn how to establish well-structured documentation systems for information security of both sanctioned and unsanctioned activities, including those reports required by law. They will learn to write technical guidelines and technical descriptions, and develop checklists. Students will also document the application of patches and configuration changes. A resume and portfolio, which is a culmination of all information security coursework, will be compiled.

Aid Code: 10 - Associate Degree.**Pre-requisites:** (150-152) and (809-166)

Complete Course Listing

150-154 Information Systems Security Measures**Credits:** 3

IS Security Measures is a lecture/lab course. The course covers topics such as system identification, authentication, auditing and monitoring for compromise, reducing attack surfaces, limiting privileged access, keeping systems updated, identifying critical assets and prioritizing their security monitoring. Other topics to be explored are implementation and configuration management, reviewing compliance regularly, evaluating settings with each new hardware or software version, and securing Active Directory domain controllers.

Aid Code: 10 - Associate Degree.**Pre-requisites:** (150-117) and (150-128) and (150-133)

Complete Course Listing

150-155 Current Issues and Trends in Information Assurance**Credits:** 3

Disaster Recovery Planning is the current issues seminar topic and others are being planned. This seminar-format course is designed to cover "hot" topics in Information Assurance technology. Course emphasizes various current or emerging conditions/problems and possible responses/solutions to them. Topics change based on emerging current issues and potential future topics may include: Advanced OS Security; Introduction to Cryptography; Emerging Technologies, etc.

Aid Code: 10 - Associate Degree.**Pre-requisites:** 150-151

Complete Course Listing

150-156 Network Forensics**Credits:** 3

This course will cover both advanced endpoint forensics (i.e. as a continuation of 150-113) and network forensics. Students will learn how to capture and analyze data from a network interface, as well as where and how to preserve it. The topic of eDiscovery, as a new discipline, will also be examined.

Aid Code: 10 - Associate Degree.**Pre-requisites:** 150-113

Complete Course Listing

150-181 Supervised Occupational Experience-Network Specialist

Credits: 2

Supervised Occupational Experience - Networking is a course that prepares the student for the transition from the classroom to the work place. Students will be employed in actual jobs in their field. They will use this opportunity to apply learned concepts and skills in practical situations and acquire the knowledge and experience of current techniques, methods, and theories in a data processing environment. The intern's progress will be monitored and evaluated by the sponsoring employer and a BTC internship advisor. The desired outcome of the course is to qualify the student for eventual employment in an entry-level IT position.

Aid Code: 10 - Associate Degree.

Pre-requisites: 152-150

Complete Course Listing

150-182 Information Technology Career Preparation

Credits: 1

This is a course designed to prepare second year students with the skills necessary to plan and execute an active job search. Topics covered include: resumes; personal data files; letters of application; and interviewing techniques. Students will prepare a strategy for finding and obtaining a position that best fits their goals and interests.

Aid Code: 10 - Associate Degree.

Pre-requisites: (150-117) and (150-128) and (152-150)

Complete Course Listing