BLACKHAWK Technical College

IT-NETWORKING & INFO SECURITY (150)

Information provided includes course descriptions by subject only. For complete 2024-2025 programs/academic plans, please refer to Academic Programs (http://catalog.blackhawk.edu/academics/).

150-113 Computer Forensics
Credits: 1-3

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 - undefined.

Complete Course Listing

150-117 Local Area Network Switching and Wireless
Credits: 1-3

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 - undefined.
Pre-requisites: 150-131

Complete Course Listing

150-118 Server and Data Center Virtualization
Credits: 1-3

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 - undefined.
Pre-requisites: (150-127)
Co-requisites: (150-128)

Complete Course Listing

150-120 Configuring Desktop Operating Systems
Credits: 1-3

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 - undefined.

Complete Course Listing

150-127 Introduction to Enterprise Virtualization
Credits: 1-3

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 - undefined.
Pre-requisites: 150-120

Complete Course Listing

150-128 Windows Enterprise Server Administration
Credits: 1-3

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 - undefined.
Pre-requisites: (150-127)
Co-requisites: (150-118)

Complete Course Listing

150-130 Introduction to Enterprise Networks
Credits: 1-3

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 - undefined.

Complete Course Listing

150-131 Routers and Routing Protocols
Credits: 1-3

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 - undefined.
Pre-requisites: 150-130

Complete Course Listing

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150-132 IT-Project Management
Credits: 1-3

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

Complete Course Listing

150-133 Network Security
Credits: 1-3

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

Complete Course Listing

150-134 Internetwork Security
Credits: 1-3

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

Complete Course Listing

150-135 Operating Systems Security
Credits: 1-3

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 - undefined.

Complete Course Listing

150-136 Perimeter Security
Credits: 1-3

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 - undefined.
Pre-requisites: 150-134

Complete Course Listing

150-139 Current Issues in Networking
Credits: 1-3

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 - undefined.

Complete Course Listing

150-140 Data and Control Structures
Credits: 1-3

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 - undefined.
Pre-requisites: 150-120

Complete Course Listing

150-141 Linux
Credits: 1-3

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 - undefined.
Pre-requisites: 150-127

Complete Course Listing

150-142 Advanced Local Area Network/Wide Area Network Topics
Credits: 1-3

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 - undefined.

Complete Course Listing

150-143 Exchange and SQL Server
Credits: 1-3

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 - undefined.
Pre-requisites: 150-128

Complete Course Listing

150-151 Information Security Principles
Credits: 1-3

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 - undefined.

Complete Course Listing

150-152 Information Systems Security Practicum
Credits: 1-3

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 - undefined.
Pre-requisites: (150-151) and (801-195 or 801-136)

Complete Course Listing

150-153 Information Systems Security Management
Credits: 1-3

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 - undefined.
Pre-requisites: (150-152) and (809-166)

Complete Course Listing

150-155 Current Issues and Trends in Information Assurance
Credits: 1-3

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 - undefined.
Pre-requisites: 150-151

Complete Course Listing

150-156 Network Forensics
Credits: 1-3

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 - undefined.
Pre-requisites: 150-113

Complete Course Listing

150-157 IT Project Management 1
Credits: 0.05-1

In this course students will explore fundamental concepts and principles of project management, such as project life cycles, knowledge areas, and the fundamental documents used in planning and executing projects.
Aid Code: 10 - undefined.
Co-requisites: 631-141

Complete Course Listing

150-158 IT Project Management 2
Credits: 0.05-1

In this course students will begin to apply project management principles in information technology settings. Students will practice identifying risks and managing costs and communications in projects.
Aid Code: 10 - undefined.
Co-requisites: (150-157)

Complete Course Listing

150-159 IT Project Management 3
Credits: 0.05-1

In this course students will explore more advanced topics in project management such as quality assurance, transitioning and closing projects, and procurement.
Aid Code: 10 - undefined.
Co-requisites: (150-158)

Complete Course Listing

150-169 Introduction to Enterprise Virtualization 1
Credits: 0.05-1

In this course students will practice the fundamentals of working with virtual machines, including the creation of new virtual machines, modifying virtual machines, and working with virtualization software tools.
Aid Code: 10 - undefined.

Complete Course Listing

150-170 Introduction to Enterprise Virtualization 2
Credits: 0.05-1

In this course students will practice more advanced processes related to virtualization, such as creating group and audit policies and remotely managing servers.
Aid Code: 10 - undefined.
Co-requisites: (150-169)

Complete Course Listing

150-171 Introduction to Enterprise Virtualization 3
Credits: 0.05-1

In this course students will build and test a virtual environment that incorporates components addressed in earlier Enterprise Virtualization courses.
Aid Code: 10 - undefined.
Co-requisites: (150-170)

Complete Course Listing

150-181 Supervised Occupational Experience-Network Specialist
Credits: 1-2

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 - undefined.
Pre-requisites: 152 150

Complete Course Listing

150-182 Information Technology Career Preparation
Credits: 0.5-1

This course is designed to allow first semester students to explore different IT positions and the use of IT in various industries. Students will visit employers and attend IT position Q&A discussions. Students will prepare a strategy for finding and obtaining a position that best fits their goals and interests.
Aid Code: 10 - undefined.

Complete Course Listing

150-183 Windows Enterprise Server Administration 1
Credits: 0.05-1

In this course students will explore concepts and principles of advanced Active Directory Administration. Students will have the opportunity to design and create a directory structure based on a given scenario, as well as utilize Active Directory and command line utilities.
Aid Code: 10 - undefined.

Complete Course Listing

150-184 Windows Enterprise Server Administration 2
Credits: 0.5-1

In this course students will practice creating industry-standard technical documentation and user group policy, as it pertains to Active Directory administration. Students will also practice creating an AD replication plan.
Aid Code: 10 - undefined.

Complete Course Listing

150-185 Windows Enterprise Server Administration 3
Credits: 0.5-1

In this course students will practice and demonstrate their ability to manage storage and file services, as well as manage file server roles and features.
Aid Code: 10 - undefined.

Complete Course Listing

150-186 LAN Switching & Wireless 1
Credits: 0.5-1

In this course students will explore concepts and principles of wireless fundamentals. Students will identify various network standards and related certifications. Students will also identify components of wireless infrastructure and client devices used in wireless networking.
Aid Code: 10 - undefined.
Co-requisites: (150-185)

Complete Course Listing

150-187 LAN Switching & Wireless 2
Credits: 0.5-1

In this course students will explore antenna technology, communication, and security fundamentals for wireless networking.
Aid Code: 10 - undefined.
Co-requisites: (150-186)

Complete Course Listing

150-188 LAN Switching & Wireless 3
Credits: 0.5-1

In this course students will practice design for wireless networks, as well as installing, configuring, and troubleshooting a wireless network.
Aid Code: 10 - undefined.
Co-requisites: (150-187)

Complete Course Listing

150-189 System Analysis & Design 1
Credits: 0.5-1

In this course students will explore concepts involved in a small-to-medium sized information systems project from inception to implementation. Students will practice using Microsoft Project.
Aid Code: 10 - undefined.

Complete Course Listing

150-190 System Analysis & Design 2
Credits: 0.5-1

In this course students will examine and compare traditional analysis and design methodologies as well as object-oriented methodologies.
Aid Code: 10 - undefined.
Co-requisites: (150-189)

Complete Course Listing

150-191 System Analysis & Design 3
Credits: 0.5-1

In this course students will practice using Microsoft Visio to diagram various components of systems as part of systems analysis. Students will also practice verbal and written communication processes in support of users and team members.
Aid Code: 10 - undefined.
Co-requisites: (150-190)

Complete Course Listing

150-192 Server & Data Center Virtualization 1
Credits: 0.5-1

In this course students will explore fundamental concepts of virtualization software. Students will practice planning for, installing, and configuring this software.
Aid Code: 10 - undefined.
Pre-requisites: (150-191)

Complete Course Listing

150-193 Server & Data Center Virtualization 2
Credits: 0.5-1

In this course students will configure standard switches, install and configure virtualization software, manage shared storage, and deploy virtual servers in an enterprise environment.
Aid Code: 10 - undefined.
Co-requisites: (150-192)

Complete Course Listing

150-194 Server & Data Center Virtualization 3
Credits: 0.5-1

In this course students will engage in the back up, recovery, and migration of virtual machines.
Aid Code: 10 - undefined.
Co-requisites: (150-193)

Complete Course Listing

150-195 Advanced LAN/WAN Topics 1
Credits: 0.5-1

In this course students will practice configuring WAN protocols, setting up a server in an enterprise environment, and installing and configuring BGP.
Aid Code: 10 - undefined.
Co-requisites: (150-194)

Complete Course Listing

150-196 Advanced LAN/WAN Topics 2
Credits: 0.5-1

In this course students will practice configuring QoS in an enterprise environment, designing and IP installation and migration, and implementing secure routing updates.
Aid Code: 10 - undefined.
Co-requisites: (150-195)

Complete Course Listing

150-197 Advanced LAN/WAN Topics 3
Credits: 0.5-1

In this course students will practice installing an enterprise level firewall, setting up VPN, and implementing VLAN in an enterprise network. Students will also practice creating documentation for these procedures.
Aid Code: 10 - undefined.
Co-requisites: (150-196)

Complete Course Listing

150-198 IT Programs Portfolio
Credits: 1

This course allows IT Program students to develop, create, and implement an IT portfolio project throughout the semester either individually or in a group. The completed portfolio projects will be showcased and presented to peers, faculty, and future employers. The student's work will be evaluated by a panel of instructors and employers.
Aid Code: 10 - undefined.

Complete Course Listing