IST 161 - Introduction to Network Administration

Lec: 3.0 Lab: 0 Credit: 3.0

Course Offered
Fall
Spring
Summer

This course is an introductory study of networking operating system administration. Techniques of installation and administration of a networking operating system will be included. This course will focus on Microsoft Desktop Administration. This course covers the objectives of the associated Microsoft certification exam.

Grade Type: Letter Grade
Division: Business Technology

IST 164 - Implementing Windows Network Infrastructure Services

Lec: 3.0 Lab: 0 Credit: 3.0

Course Offered
Spring
Summer

This course is a study of the fundamentals of installing, configuring and utilizing Windows networking services while exploring techniques used to design, create and implement secure communications across the networks, which may consist of multiple vendors. Emphasis is also provided on support of remote users and central management concepts. This course covers the objectives of the associated Microsoft certification.

Prerequisite
IST 165

Grade Type: Letter Grade
Division:
IST 165 - Implementing and Administering Windows Directory Services

Lec: 3.0 Lab: 0 Credit: 3.0

Course Offered
Fall
Spring
Summer

This course is a study of directory services covering the planning, design, installation, configuration and administration of a network directory structure. This course covers the objectives of the associated Microsoft certification exam.

Grade Type: Letter Grade
Division: Business Technology

IST 166 - Network Fundamentals

Lec: 3.0 Lab: 0 Credit: 3.0

Course Offered
Fall
Spring
Summer

This course is a study of local area networking concepts through discussions on connectivity, communications and other networking fundamentals. The course is designed to prepare the student to be successful in completing industry network fundamental certification exams. This course covers the content included in the CompTIA Network + certification exam.

Grade Type: Letter Grade
Division: Business Technology

IST 190 - Linux Essentials

Lec: 3.0 Lab: 0 Credit: 3.0

Course Offered
Fall
Spring
Summer

This course provides students with the fundamental knowledge and concepts of the Linux operating system, including command line functions, file systems, user and group
administration, process management, text editors, and network applications. This course helps students prepare for the CompTIA Linux+ certification exam.

**Grade Type:** Letter Grade  
**Division:** Business Technology

### IST 191 - Linux System Administration

**Lec:** 3.0  **Lab:** 0  **Credit:** 3.0  

**Course Offered**  
Fall  
Spring  
Summer  

This course provides students with the skills necessary to administer a Linux system, including hardware/software configuration, user and group administration, Linux network configuration, and file system management. This course helps students prepare for the RedHat Certified Systems Administrator (RHCSA) certification exam.  

**Prerequisite**  
IST 190

**Grade Type:** Letter Grade  
**Division:** Business Technology

### IST 192 - Linux Network Applications

**Lec:** 3.0  **Lab:** 0  **Credit:** 3.0  

**Course Offered**  
Summer  

This course provides students with the skills necessary to deploy and administer the core networking services in a Linux system, such as Apache Web Server, Samba File Server, BIND Domain Name Service, NFS and others. This course helps students prepare for the RedHat Certified Engineer (RHCE) certification exam.  

**Prerequisite**  
IST 191

**Grade Type:** Letter Grade  
**Division:** Business Technology
IST 198 - Cloud Essentials

Lec: 3.0 Lab: 0 Credit: 3.0

Course Offered

Fall

This course is a study of Cloud computing as a framework for providing network access to shared computing resources including storage, network, server and virtualization infrastructures.

Prerequisite

IST 166

or

IST 190

Grade Type: Letter Grade
Division: Business Technology

IST 201 - Cisco Internetworking Concepts

Lec: 3.0 Lab: 0 Credit: 3.0

Course Offered

Fall

Spring

This course is a study of current and emerging computer networking technology. Topics include safety, networking, network terminology and protocols, network standards, LANs, WANs, OSI model, cabling tools, Cisco routers, router programming, star topology, IP addressing, and network standards. This helps prepare students for the Cisco Certified Entry Network Technician (CCENT) credential.

Prerequisite

IST 166

Grade Type: Letter Grade
Division: Business Technology

IST 202 - Cisco Router Configuration

Lec: 3.0 Lab: 0 Credit: 3.0

Course Offered

Fall

Spring
This course is a study of LANs, WANs, OSI model, Ethernet, token ring, FDDI, TCP/IP protocol, dynamic routing, and the network administrator’s role and function. This helps prepare students for the Cisco Certified Entry Network Technician (CCENT) credential.

**Prerequisite**

IST 201

**Grade Type:** Letter Grade  
**Division:** Business Technology

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**IST 203 - Advanced Cisco Router Configuration**

**Lec:** 3.0  **Lab:** 0  **Credit:** 3.0

**Course Offered**

Fall  
Spring

This course is a study of configuring Cisco routers. This helps prepare students for the Cisco Certified Network Associate in Routing and Switching (CCNA/RS) credential.

**Prerequisite**

IST 202

**Grade Type:** Letter Grade  
**Division:** Business Technology

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**IST 204 - Cisco Troubleshooting**

**Lec:** 3.0  **Lab:** 0  **Credit:** 3.0

**Course Offered**

Fall  
Spring

This course is a study of troubleshooting network problems. This helps prepare students for the Cisco Certified Entry Network Associate in Routing and Switching (CCNA/RS) credential.

**Prerequisite**

IST 203

**Grade Type:** Letter Grade  
**Division:** Business Technology
**IST 205 - Cisco Advanced Routing**

**Lec: 3.0 Lab: 0 Credit: 3.0**

This course is a study of the concepts and technologies of extending IP addresses, routing principles, scalable routing protocols, managing traffic and access, and building and optimizing scalable Internetworks. The course puts emphasis on expanding network capabilities. The course focuses on learning using technologies such as wireless networks, advanced routing, and network redundancy to ensure high availability in enterprise networks. This course helps prepare students for careers as associate-level Cybersecurity Analysts and for the Cisco Certified Network Associate in Cyber Operations certification exams.

**Prerequisite**

IST 165  
and  
IST 190  
and  

**Corequisite**

IST 202  
and  

**Prerequisite or Corequisite**

IST 293

**Grade Type:** Letter Grade  
**Division:** Business Technology

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**IST 206 - Cisco Remote Access**

**Lec: 3.0 Lab: 0 Credit: 3.0**

**Course Offered**

Summer

This course is a study of building a remote access network to interconnect central sites to branch offices and home office/telecommuters, control access to the central site and maximize bandwidth utilization over the remote links. This helps prepare students for the Cisco Certified Network Associate (CCNA) Security credential.

**Prerequisite**

IST 202

**Grade Type:** Letter Grade  
**Division:** Business Technology
IST 207 - Cisco Multilayer Switching

Lec: 3.0 Lab: 0 Credit: 3.0
This course is a detailed study of how routing and switching technologies work together. Included is an in-depth analysis of combining layer 2 and layer 3 switching technologies. This course expands knowledge of network hierarchical design with emphasis on various WAN protocol configuration, current Broadband technologies, network security, and troubleshooting. This course helps prepare students for careers as associate-level Cybersecurity Analysts and for the Cisco Certified network Associate in Cyber Operations certification exams.

Prerequisite
IST 205

Grade Type: Letter Grade
Division: Business Technology

IST 209 - Fundamentals of Wireless LANs

Lec: 3.0 Lab: 0 Credit: 3.0
This introductory course is the study of design, installation, configuration, operations and troubleshooting of wireless LANs. The course includes an overview of wireless technologies, standards, devices, security, design and best practices, emphasizing real-world applications and skills. This helps prepare students for the Cisco Certified Network Associate (CCNA) wireless credential.

Prerequisite
IST 204

Grade Type: Letter Grade
Division: Business Technology

IST 235 - Handheld Computer Programming

Lec: 3.0 Lab: 0 Credit: 3.0
Course Offered
Fall
Spring
This course is a survey of the techniques of rapid application development for handheld devices. Topics include setup of development environment, creation and deployment of programs, and design strategies to overcome memory and interface limitations. The focus of the course will be the development of software for the Android mobile phone.

Prerequisite
IST 239
with a minimum grade of C

Grade Type: Letter Grade
Division: Business Technology

IST 239 - Datum and JavaScript

Lec: 3.0 Lab: 0 Credit: 3.0

Course Offered
Fall
Spring
Summer

This course includes concepts and skills for developing dynamic functionality and interactivity for websites using JavaScript: variables, operators, conditionals, functions, objects (image and form), properties, methods, cookies, frames and arrays. This course covers the basics of the JavaScript language, how to place JavaScript into an HTML file and advanced JavaScript topics such as event handlers, arrays, forms and cookies.

Prerequisite
CPT 162
or
ARV 227
and
CPT 114
or
CPT 167

Grade Type: Letter Grade
Division: Business Technology

IST 250 - Network Management

Lec: 3.0 Lab: 0 Credit: 3.0

Course Offered
Spring

This course is a study of planning, organizing and controlling telecommunication functions for the potential telecommunications manager. It emphasizes current situations and techniques. This course covers the VMware virtualization objectives associated with the VMware Certified Professional (VCP) certification exam.
Prerequisite
IST 253

Grade Type: Letter Grade
Division: Business Technology

IST 253 - LAN Service and Support

Lec: 3.0 Lab: 0 Credit: 3.0

Course Offered
Fall
Spring
Summer

This course focuses on installing, maintaining and troubleshooting local area networks in a lab environment. This course covers an introduction to virtualization technologies and vendors including VMware, Microsoft and Citrix.

Grade Type: Letter Grade
Division: Business Technology

IST 260 - Network Design

Lec: 3.0 Lab: 0 Credit: 3.0

Course Offered
Fall
Spring
Summer

This course is a study of the processes and techniques required to identify the most attractive design solution of a telecommunications network combining creativity, rigorous discipline, analysis, and synthesis while emphasizing the solution in terms of cost and performance.

Prerequisite
IST 165
and
IST 166
and
IST 190
and
IST 202
**Grade Type:** Letter Grade  
**Division:** Business Technology

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**IST 263 - Designing Windows Network Security**

**Lec:** 3.0  
**Lab:** 0  
**Credit:** 3.0

**Course Offered**

Spring  
Summer

This course is an advanced study of security features of networks including authentication protocol, public key infrastructure, IPSEC and certificate servers. This course covers Microsoft enterprise level server administration. This course covers the objectives of the associated Microsoft certification exam.

**Prerequisite**

IST 164  
and  
IST 165

**Grade Type:** Letter Grade  
**Division:** Business Technology

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**IST 268 - Computer Forensics**

**Lec:** 3.0  
**Lab:** 0  
**Credit:** 3.0

**Course Offered**

Fall  
Spring  
Summer

This course provides students with a foundational knowledge in computer forensics investigation. Students are introduced to the skills, tools and methods used to gather, document and handle electronic evidence.

**Prerequisite**

IST 190  
or  
IST 293

**Grade Type:** Letter Grade  
**Division:** Business Technology
IST 269 - Digital Forensics

Lec: 3.0  Lab: 0  Credit: 3.0

Course Offered
Fall
Spring

This course examines advanced technical aspects of digital computer evidence to include detection, collection, identification and preservation. Emphasis is placed on specific tools and methods for extracting deleted or destroyed computer-related evidence.

Prerequisite
IST 268

Grade Type: Letter Grade
Division: Business Technology

IST 272 - Relational Database

Lec: 3.0  Lab: 0  Credit: 3.0

Course Offered
Fall
Spring

This course provides a comprehensive foundation in both SQL and relational database design and implementation. Dynamic and embedded SQL programming techniques are emphasized. Additional topics include forms developer, triggers, stored procedures and PL/SQL programming.

Prerequisite
CPT 202

Grade Type: Letter Grade
Division: Business Technology

IST 274 - Database Administration

Lec: 3.0  Lab: 0  Credit: 3.0

Course Offered
Fall
Spring
This course is a study of the duties and responsibilities of a database administrator. The course covers setting up, maintaining, and troubleshooting a distributed, multi-user database.

**Prerequisite**
IST 272

**Grade Type:** Letter Grade  
**Division:** Business Technology

**IST 286 - Technical Support Internship I**

**Lec:** 0  
**Lab:** 9.0  
**Credit:** 3.0

**Course Offered**

Fall  
Spring  
Summer

This course is an entry-level technical support/help desk internship. Students intern at the college’s help desk and provide support to faculty and staff. Students will participate in weekly evaluation sessions of calls and solutions.

**Prerequisite**

CPT 209  
and  
IST 165  
and  
departmental approval

**Grade Type:** Letter Grade  
**Division:** Business Technology

**IST 287 - Technical Support Internship II**

**Lec:** 0  
**Lab:** 9.0  
**Credit:** 3.0

**Course Offered**

Fall  
Spring

This course is an intermediate-level technical support/help desk internship. Students intern at the college’s help desk and provide support to faculty and staff. The student prepares a portfolio for submission.

**Prerequisite**
IST 286
and
departmental approval

**Grade Type:** Letter Grade  
**Division:** Business Technology

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**IST 290 - Special Topics in Information Sciences**

**Lec:** 3.0  **Lab:** 0  **Credit:** 3.0

**Course Offered**

Summer

This course covers special topics in information sciences technologies.  
Departmental approval

**Grade Type:** Letter Grade  
**Division:** Business Technology

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**IST 291 - Fundamentals of Network Security I**

**Lec:** 3.0  **Lab:** 0  **Credit:** 3.0

**Course Offered**

Spring  
Summer

This course is a study of introductory levels of security processes based on a security policy, emphasizing hands-on skills in the area of secure perimeter, security connectivity, security management, identity services and intrusion detection. The course prepares students to manage network security. This course covers the objectives associated with the CompTIA Advanced Security Practitioner (CASP) certification exam.

**Prerequisite**

IST 190  
and  
IST 293

**Grade Type:** Letter Grade  
**Division:** Business Technology
IST 292 - Fundamentals of Network Security II

Lec: 3.0 Lab: 0 Credit: 3.0

Course Offered
Spring
Summer

This course is a study of advanced security processes based on a security policy, emphasizing hands-on skills in the area of secure perimeter, security connectivity, security management, identity services and intrusion detection. The course prepares students to install/configure secure firewalls. This course leverages skills and knowledge in the Network and Cybersecurity curriculum to build, document and demonstrate a secure information technology infrastructure

Prerequisite
IST 291
or
IST 294

Grade Type: Letter Grade
Division: Business Technology

IST 293 - IT and Data Assurance I

Lec: 3.0 Lab: 0 Credit: 3.0

Course Offered
Fall
Spring
Summer

This course introduces the basics of network security. Topics covered will include network vulnerabilities and threats, security planning, security technology, network security organization, as well as legal and ethical issues related to network security. This course will provide coverage of the objectives associated with the CompTIA Security+ certification.

Grade Type: Letter Grade
Division: Business Technology

IST 294 - IT and Data Assurance II

Lec: 3.0 Lab: 0 Credit: 3.0

Course Offered
Spring
Summer

This course introduces methods for attacking a network. Concepts, principles, tools and techniques for attacking and disabling a network will be covered in the context of understanding how to properly secure a network as a network administrator. This course will provide coverage of the learning objectives associated with the EC-Council Certified Ethical Hacker certification. Topics such as social engineering, physical security and logistics will also be discussed.

Prerequisite
IST 293

Grade Type: Letter Grade
Division: Business Technology

IST 298 - Advanced Cloud Computing

Lec: 3.0 Lab: 0 Credit: 3.0

Course Offered
Spring

This course covers advanced concepts of cloud computing. Topics include how to implement, administer and troubleshoot private and public cloud services, delivery models, virtualization infrastructures, storage and networks.

Prerequisite
IST 198

Grade Type: Letter Grade
Division: Business Technology