

# Computer Networking & Security

## CNS100D—DIPLOMA PROGRAM

### DAY/EVENING PROGRAMS

#### **L** Lincoln, Rhode Island Campus

total instructional hours . . . . . 1080  
 total program credits\* . . . . . 54.0  
 weeks to complete—day . . .approximately 48 (including holidays and scheduled breaks)  
 weeks to complete—eve . . .approximately 73 (including holidays and scheduled breaks)

**\*The listing of credit hours is not meant to imply that credits can be transferred into college or other private career school programs. Transfer credits are at the sole discretion of the receiving school.**

#### program objective

The Computer Networking & Security program will provide students with a strong foundation on which to build a successful career in Information Technology. Students will first be exposed to the core principles and procedures of networking concepts, office applications, computer hardware and software, and desktop operating systems. They will also be exposed to the unique challenges of the IT business world and become skilled in customer service essentials. This program emphasizes hands-on learning experiences based on performance based objectives, and incorporates troubleshooting techniques in every course.

Upon completion of the program, students will be encouraged and eligible to sit for a specific set of industry certifications such as; CompTIA A+, Network+, Server+, Security+, MCSA, and EC Certified Ethical Hacker.

Upon completion of this program, students will be trained for entry-level positions in the IT field of their choice as Computer and Information Systems Technicians, Software Support Technicians, Network Systems and Data Communication Analysts, Security Support Technicians, Help Desk Support Technicians, and other employment in the Information Technology field.

number	course	lecture hours	lab hours	total hours	total credits	prerequisites
IT100	Office Applications	45	45	90	4.5	
IT120	Networking Tools and Techniques	45	45	90	4.5	
IT130	Desktop Operating Systems	45	45	90	4.5	
IT140	Servers, Routers and Switches	45	45	90	4.5	IT120
IT150	PC Repair and Support	45	45	90	4.5	
IT160	Advanced PC Repair and Support	45	45	90	4.5	IT150
IT175	Customer Service and Help Desk Operations	45	45	90	4.5	
IT206	Microsoft Windows Server	45	45	90	4.5	
IT207	Microsoft Windows Infrastructure	45	45	90	4.5	IT206
IT210	Security+	45	45	90	4.5	
IT211	Network Defense and Countermeasures	45	45	90	4.5	IT210
IT212	Ethical Hacking and Network Defense	45	45	90	4.5	IT210 or IT211
TOTALS		540	540	1080	54.0	

NOTE: Course numbers and sequences are listed here for reference only. The actual delivery sequence of courses contained in this program may vary depending on individual campus scheduling.



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*This program may not be offered at all campuses.*

**LOANS AND GRANTS AVAILABLE TO THOSE WHO QUALIFY**

**IT100–OFFICE APPLICATIONS**

90 Contact Hrs (45 Lecture, 45 Lab); 4.5 Credits

This course focuses on utilization of the entire suite of Microsoft Office products including Word, Excel, Access, PowerPoint and Outlook. This course will familiarize students with the basics of office applications, basic troubleshooting and how these products work from an IT perspective.

*Prerequisite(s): None*

**IT120–NETWORKING TOOLS AND TECHNIQUES**

90 Contact Hrs (45 Lecture, 45 Lab); 4.5 Credits

This course provides an overall introduction to the basics of networking and provides students the skill set necessary to work in the IT world. Topics include network essentials, networking operations, and troubleshooting network related hardware, including wireless technologies, routers, hubs and switches.

*Prerequisite(s): None*

**IT130–DESKTOP OPERATING SYSTEMS**

90 Contact Hrs (45 Lecture, 45 Lab); 4.5 Credits

Students enrolled in this course will learn to implement, administer, and troubleshoot current desktop operating systems, including Windows XP, Vista or a variant form of Linux. Students will become familiar with the operating system, including advanced troubleshooting techniques, and utilize tools to manage the desktop of users in the corporate working world as well as the home computer world.

*Prerequisite(s): None*

**IT140–SERVERS, ROUTERS AND SWITCHES**

90 Contact Hrs (45 Lecture, 45 Lab); 4.5 Credits

This course teaches networking based on technology, covering networking concepts using a top-down, theoretical, and integrated approach—from Servers to the network hardware Infrastructure, from network services to advanced routing and switching concepts. It also helps students develop the skills necessary to fulfill the job responsibilities of network technicians, network administrators, and network engineers.

*Prerequisite(s): IT120*

**IT150–PC REPAIR AND SUPPORT**

90 Contact Hrs (45 Lecture, 45 Lab); 4.5 Credits

This course will validate knowledge of basic computer hardware and operating systems using hands on training to cover skills such as installing, building, upgrading, repairing, configuring, troubleshooting, optimizing, diagnosing, and prevention maintenance as well as elements of soft skills and security.

*Prerequisite(s): None*

**IT160–ADVANCED PC REPAIR AND SUPPORT**

90 Contact Hrs (45 Lecture, 45 Lab); 4.5 Credits

This course will provide students with the ability to perform tasks such as installation, building, repairing, configuration, and troubleshooting, optimizing, diagnosing and preventative maintenance in a context of field service or enterprise environment. Topics will include working within a mobile or corporate environment with a focus on customer service.

*Prerequisite(s): IT150*

**IT175–CUSTOMER SERVICE AND HELP DESK OPERATIONS**

90 Contact Hrs (45 Lecture, 45 Lab); 4.5 Credits

This course will provide students with an understanding of the helpdesk environment and the knowledge, skills, and abilities necessary to work in the user support industry. Students will learn the importance of customer relations. Students will learn essential problem-solving and communication skills, as well as teamwork and effective customer service skills.

*Prerequisite(s): None*

**IT206–MICROSOFT WINDOWS SERVER**

90 Contact Hrs (45 Lecture, 45 Lab); 4.5 Credits

This course provides students with the skills required to meet the challenges students will face as a Microsoft networking professional. Topics covered in this course include: Introduction to Windows Server, Managing Hardware Devices, Creating and Managing Users, Implementing and Managing Groups, Managing Access to Files, Managing Disk and Data Storage, Advanced File System Management, Implementing and Managing Printing, Implementing and Using Group Policies, Administering a Server, Monitoring Server Performance, Managing and Implementing Backups and Disaster Recovery, Administering Web Resources, and Security Basics for Windows Server.

*Prerequisite(s): None*

**IT207–MICROSOFT WINDOWS INFRASTRUCTURE**

90 Contact Hrs (45 Lecture, 45 Lab); 4.5 Credits

This course is designed to provide the student with the knowledge and skills in managing and maintaining a Windows network infrastructure. Students will become proficient in the areas of configuring and managing Active Directory, Replication, Domain Structure, DHCP Servers & Clients, DHCP Relay Agents, DNS servers, WINS Servers, Routers, RAS Servers, Network Security, Kerberos, NTLM, EFS, IPSec, WebDAV, Authentication Protocols, Group Policies, Security Templates, SUS, TCP/IP Utilities, and Windows Monitoring and Troubleshooting Utilities.

*Prerequisite(s): IT206*

**IT210–SECURITY+**

90 Contact Hrs (45 Lecture, 45 Lab); 4.5 Credits

In this course students will learn network security concepts, strategies, and techniques, and examine theoretical concepts that make the world of security unique. The advancement of network implementation as well as timeless problem solving strategies to security challenges will also be discussed.

*Prerequisite(s): None*

**IT211–NETWORK DEFENSE AND COUNTERMEASURES**

90 Contact Hrs (45 Lecture, 45 Lab); 4.5 Credits

This course is designed to provide students with a solid foundation in network security fundamentals through learning intrusion detection techniques, as well as such essential practices as developing a security policy, performing Network Address Translation, setting up packet filtering, and installing proxy servers, firewalls, and virtual private networks.

*Prerequisite(s): IT210*

**IT212–ETHICAL HACKING AND NETWORK DEFENSE**

90 Contact Hrs (45 Lecture, 45 Lab); 4.5 Credits

Ethical Hacking and Network Defense introduces the student to the art of ethical hacking and security testing, preparing students to be efficient security professionals. This course will cover the tools and techniques that ethical hackers and security testers use to discover vulnerabilities and offer solutions to protect computer networks. Students will learn what attackers know and develop the ability to think outside the box. They will also learn fundamental security testing concepts. Students will gain practical knowledge in documentation of security tests, and ethical and legal ramifications of security testing, including how to protect network resources from attacks.

*Prerequisite(s): IT210 or IT211*