

**CENTER FOR PROFESSIONAL DEVELOPMENT****COMPTIA™ NETWORK+ CERTIFICATION TRAINING**

80 Hours/6 Months/Instructor-Facilitated

Course Code: **CPD052****OVERVIEW**

Excelsior College has partnered with ed2go to bring you the CompTIA™ Network+ Certification Training program. This program will prepare you for a career as a network technician and qualify you to take the CompTIA™ Network+ certification exam. This program will give you the skills you need to manage, maintain, troubleshoot, install, and configure basic network infrastructure. You'll also master networking concepts and gain a fundamental knowledge of network design, security, routing, and switching.

\*This online program will prepare you to take your CompTIA™ Network+ certification exams, but the exam voucher is not offered as a part of this online program. It is your responsibility to register and schedule your certification exam.

**OBJECTIVES**

Upon successful completion of this program, you will be able to:

- Explain the function of each layer of the OSI model
- Explain the layers and functions of the TCP/IP Model
- Categorize standard cable types and their properties
- Identify common connector types
- Identify common physical network topologies
- Categorize WAN technology types and their properties
- Categorize LAN technology types and their properties
- Explain common logical network topologies and their characteristics
- Install, configure, and differentiate between common network devices
- Identify the functions of specialized network devices
- Describe the IPv4, IPv6 and MAC addressing standards
- Evaluate the use of addressing technologies and addressing schemes
- Implement addressing services like DHCP
- Evaluate the use of the Domain Name Services and understand dynamic DNS
- Select the appropriate command line interface tool and interpret the output to verify functionality
- Explain the function of common network protocols
- Describe commonly used TCP and UDP default ports
- Describe common routing protocols
- Explain the purpose and properties of routing
- Explain the advanced features of a switch
- Compare the characteristics of wireless communication standards
- Implement a basic wireless network
- Understand and implement wireless Security
- Create and use network management documentation

- Conduct network monitoring to identify performance and connectivity issues using network monitoring utilities
- Perform network performance optimization
- Describe and use different network scanners
- Understand network security requirements such as firewalls, spyware and adware scanners, patch management, OS security mechanisms and physical security implementations
- Examine virtualization technologies
- Evaluate the requirements for configuring a SOHO network

### **MATERIALS INCLUDED**

- *CompTIA Network+ All-in-One Exam Guide, Fourth Edition*

### **OUTLINE**

- I. Unit 1
  - 1.1. Network Models - OSI and TCP/IP
  - 1.2. Physical Network Topologies
  - 1.3. LAN Technologies
  - 1.4. WAN Technologies
  - 1.5. Cabling and Connectors
  - 1.6. Ethernet Standards
- II. Unit 2
  - 2.1. Network Devices
  - 2.2. TCP/IP Concepts – IPv4, IPv6, Subnetting
  - 2.3. DHCP
- III. Unit 3
  - 3.1. TCP/IP Ports, Protocols and Services
  - 3.2. Name Resolution
  - 3.3. Routing
  - 3.4. Switching
- IV. Unit 4
  - 4.1. Remote Access
  - 4.2. Remote Connection Technologies
  - 4.3. Wireless Networking
  - 4.4. Network Performance and Optimization
  - 4.5. Network Security – Authentication, Firewalls, Network Scanners, IPSec, VPNs, Encryption
  - 4.6. Network Management and Documentation
- V. Unit 5
  - 5.1. Virtualization
  - 5.2. Network Troubleshooting
  - 5.3. SOHO Networking Concepts

## **COMPUTER REQUIREMENTS**

High-speed Internet is recommended. This program can be taken on a PC or a Mac. Although the labs can only be completed on a PC. This program is compatible with the Windows XP and later operating systems and IE 7 and later browsers.

You will also need to have the latest versions of Adobe Flash and Adobe Reader to properly view all program content. In addition, you will need Windows Media Player Series 11 or later, DirectX 9+, and Java.

## **INSTRUCTOR BIO**

Brock Stout has honed his skills as an IT professional and instructor by working as a contractor with a multitude of Fortune 500 companies over the last 15 years. A graduate of the University of Dayton, Brock has an extensive background in CCNA curriculum development and is currently teaching at the collegiate level. Brock also owns an IT consulting firm providing a wide range of services including remote labs. Brock has designed and taught numerous networking classes for public and private adult education programs.