

# CCNA

## Online Certification Program



The Fast Lane CCNA Online Certification Program is designed to provide a clear steady path to achieve your CCNA certification goal.

This program combines a 360 degree learning approach and a training regimen that includes course assessments, mentoring services, remote hands-on labs, and Instructor-Led Online (ILO) sessions into a comprehensive learning environment. This learning program is designed to support training requirements and budget constraints for individuals and organizations worldwide while providing an experience similar to traditional classroom training.

- **Assessment:** Through the Fast Lane Learning Center, students can access the Cisco assessment exams created for each CCNA course. These exams will help you understand topics to be covered in the course as well as areas where you need additional focus to ensure mastery.
- **Planning:** Understanding the areas where you need additional preparation helps you identify and utilize the resources available in this program to shore up those skills gaps.
- **Learning:** ILO sessions conducted by Fast Lane instructors provide you with information you will need to successfully complete the program and become a CCNA. You will have access to Fast Lane SMEs located around the world through WebEx Roundtable discussions and online forums.
- **Practice:** Remote Hands-on labs are completed between ILO sessions during the CCNA Online Certification Program. You will have access to the remote labs throughout the entire program.
- **Review:** You can discuss your lab and/or assessment exam results with a program SME to help plan your next learning activity.
- **Mastery:** Utilizing the program resources to create your individual plan will guarantee subject mastery that will be confirmed through your exam scores.

**Target Audience:**

**CCNA candidates**

**Prerequisites:**

**Basic understanding of Routing and Switching technologies**

# Course Objectives

The CCNA Online Certification Program will provide you with resources and tools needed to properly prepare for the CCNA certification. These resources will be available to you at your location and convenience. Students can complete hands-on labs, view recorded ILO sessions and chat with fellow students and Fast Lane SMEs when the time is right for you.

## Program Content:

### ICND-1

#### Session 1 - Exploring Network Functions, LANs and Cisco IOS

- Exploring the Functions of Networking
- Securing the network
- Host-to-Host Communications Model
- Understanding the TCP/IP Internet Layer
- Understanding the TCP/IP Transport Layer
- Exploring the Packet Delivery Process
- Understanding Ethernet
- Connecting an Ethernet LAN

#### Session 2 - LAN Switching and Wireless LAN Switching (WLAN)

- Understanding the Challenges of Shared LANs
- Solving Network Challenges with Switched LAN Technology
- Exploring the Packet Delivery Process
- Operating Cisco IOS
- Starting a switch
- Understanding Switch Security
- Maximizing the benefits of Switching
- Troubleshooting Switch issues
- Exploring Wireless Networking
- Understanding WLAN Security
- Implementing a WLAN

#### Session 3 - LAN Routing and Cisco Router Security

- Exploring the functions of Routing
- Understanding Binary basics
- Constructing a Network Addressing Scheme
- Starting a Cisco Router
- Configuring a Cisco Router
- Exploring the Packet Delivery Process
- Understanding Cisco Router Security
- Using Cisco SDM
- Using a Cisco Router as a DHCP Server
- Accessing Remote Devices

#### Session 4 - Wide Area Networking (WAN)

- Understanding WAN Technologies
- Enabling the Internet Connection
- Enabling Static Routing
- Configuring Serial Encapsulation

#### Session 5 - RIP and Cisco Device Management

- Enabling RIP
- Discovering Neighbors on the Network
- Managing Cisco Router Startup and Configuration
- Managing Cisco Devices

### ICND-2

#### Session 6 - Trunks, VLAN Routing and Spanning Tree

- Implementing VLANs and Trunks
- Improving Performance with Spanning Tree
- Routing between VLANs
- Troubleshooting Switched Networks

#### Session 7 - Routing Operations and VLSM

- Reviewing Routing Operations
- Implementing VLSM

#### Session 8 - OSPF and EIGRP

- Implementing OSPF
- Troubleshooting OSPF
- Implementing EIGRP
- Troubleshooting EIGRP

#### Session 9 - ACL, NAT, PAT and IPv6

- Introducing ACL Operation
- Configuring and Troubleshooting ACLs
- Scaling the Network with NAT and PAT
- Transitioning to IPv6

#### Session 10 - VPN, PPP and Frame Relay

- Introducing VPN Solutions
- Establishing a Point-to-Point WAN connection with PPP
- Establishing a WAN connection with Frame Relay
- Troubleshooting Frame Relay WANs

### Labs

- Using Windows Applications as Network Tools
- Observing the TCP Three Way Handshake
- Observing Extended PC Network Information
- Connecting to the remote lab equipment
- Performing Switch Sertup and Initial Configuration
- Enhancing the Security of the Initial Switch Configuration
- Operating and Configuring a Cisco IOS Device
- Initial Router Startup
- Initial Router Configuration
- Enhancing the Security of Initial Router Configuration
- Using Cisco SDM to Configure DHCP Server Function
- Connecting to the Internet
- Connecting to the Main Office
- Enabling Dynamic Routing to the Main Office
- Using Cisco Discovery Protocol
- Managing Router Startup Options
- Managing Cisco Devices
- Confirming the Reconfiguration of the Branch Network
- Configuring Expanded Switched Networks
- Troubleshooting Switched Networks
- Implementing OSPF
- Troubleshooting OSPF
- Implementing EIGRP
- Troubleshooting EIGRP
- Implementing and Troubleshooting ACLs
- Configuring NAT and PAT
- Implementing IPv6
- Establishing a Frame Relay WAN
- Troubleshooting Frame Relay WANs



## Schedule

### Jul 6-31, 2009

Online training | Time zone: US/Eastern Course language: English

### Jul 6-31, 2009

Online training | Time zone: US/Pacific Course language: English

### Aug 3-28, 2009

Online training | Time zone: US/Eastern Course language: English

### Aug 3-28, 2009

Online training | Time zone: US/Pacific Course language: English

### Sep 8-Oct 2, 2009

Online training | Time zone: US/Pacific Course language: English

### Sep 8-Oct 2, 2009

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