

## Course Description

In this intensive Boot Camp, get the training and practice you need to design a strong, effective network as you prepare for the CCDA exam that supports Designing for Cisco Internetwork Solutions (DESGN) v2.0. Our enhancements to Cisco's authorized content combined with case study practice and homework will have you exam ready in only 5 days. We even offer a guarantee-the best available-to help you reach your training goals.

This course includes:

- Enhanced content that exceeds standard authorized Cisco content
- World-class Certified Cisco Systems instructors
- CCDA workbook, including case study practice and nightly homework
- Additional study aids to help you pass the CCDA exam
- Free DESGN Self-Paced e-Learning CD
- Access to Self Test Software's CCDA exam prep products
- One free exam voucher for 640-863 DESGN

## Boot Camp Hours

Class begins each day at 8:00 AM and may extend until 8:00 PM. It is not uncommon for some students to remain past 8:00 PM depending upon the number and experience of the students in the class.

## Who Should Attend

This course is designed for individuals who want to achieve the Cisco CCDA certification.

# CCDA

## Learning Objectives

After you complete this course, you will be able to:

- Principles of network design and the guidelines for building a network design solution
- How the Enterprise Composite Network model simplifies the complexity of today's networks
- Design the Enterprise Campus in a hierarchical modular fashion using SONA
- Design the Enterprise Campus network
- Design the Enterprise Edge network
- Select the appropriate Network Management Solution
- Design a network addressing plan
- Select optimal routing protocols for the network
- Evaluate security solutions for the network
- Design Voice over IP and IP Telephony
- Design a wireless solution using Lightweight Access Points and the Wireless LAN Controller
- All topics on the CCDA certification exam
- Test-taking tips and techniques

# CCDA Boot Camp

## Course Outline

### **Module 1. Applying a Methodology to Network Design**

- Introducing SONA
- Identify Design Requirements
- Characterizing the Existing Network
- Using the Top-Down Approach
- Implementing the Design Methodology

### **Module 2. Structuring and Modularizing the Network**

- Designing the Network Hierarchy
- Using a Modular Approach in Network Design
- Using Infrastructure Services
- Identifying Network Management Protocols and Features

### **Module 3. Basic Campus and Data Center Design Considerations**

- Campus Design Methodology
- Designing the Campus Infrastructure Module
- Enterprise Data Center Considerations

### **Module 4. Designing Remote Connectivity**

- Enterprise Edge WAN Design Methodology
- Selecting Wide Area Network Technology
- Designing the Enterprise Branch

### **Module 5. Designing IP Addressing in the Network and Selecting Routing Protocols**

- Designing IP Addressing
- Introduction to IPv6
- Reviewing Enterprise Routing Protocols
- Designing a Routing Protocol Deployment

### **Module 6. Evaluating Security Solutions for the Network**

- Defining Network Security
- The Cisco Self-Defending Network
- Selecting Network Security Solutions

### **Module 7. Designing Voice Networking Traditional Voice Architectures and Features**

- Integrating Voice Architectures
- Identify the Requirements of Voice Technologies

### **Module 8. Wireless Network Considerations**

- Cisco Unified Wireless Network
- Wireless Network Controller Technologies
- Designing Wireless Networks with Controllers

### **Module 9. Additional Resources**

# CCDA Boot Camp

## Case Studies

All of the CCDA case studies focus on the network design issues of a fictional hospital, ACMC. You will work in teams to solve the case studies and create and maintain a master design document throughout the week.

### **Case 1: Network Upgrade**

Learn to document customer requirements and the existing network, identify missing information, and outline a major network design, including the scope of the project and major design tasks.

### **Case 2: Network Structure and Modularity**

Practice applying the structured design principles learned in class.

### **Case 3: Enterprise Campus Design**

Utilize the Cisco concept of enterprise network modules to propose a redundant campus design for ACMC. Compare various combinations of Layer 2 vs. Layer 3 switching applied to access, distribution, and core modules.

### **Case 4: WAN Design**

Select the most optimal WAN transport for ACMC, and develop a WAN backup strategy. Add additional offices to the network design.

### **Case 5: Network Addressing Plan**

Develop a method for planning the IP address space and apply it based on ACMC's needs. Consider IP subnetting, VLSM, and summarization techniques, and incorporate them into the network design document. Select an appropriate routing protocol for ACMC and consider deployment issues.

### **Case 6: Network Security Design**

Select the appropriate security solutions for ACMC based on principles learned in class and customer requirements.

### **Case 7: Voice Transport Over an IP Network**

Consider the effect of transporting voice across the ACMC data network. Analyze multiple scenarios to test the effect on bandwidth for data-only and voice-only traffic. Also, analyze the effects of adding QoS. Finally, calculate combined voice and data traffic to fully understand the impact on ACMC's network design.

### **Case 8: Wireless Networking Solutions**

Select the appropriate technologies, equipment, and topology for Wireless LAN deployment at ACMC.

### **Case 9: Adding More Hospitals to the ACMC Network**

This mastery case can be completed by each team on Friday or used as a take-home assignment.