

Cisco Certified Entry Networking Technician

100-101 (ICND1)

Course Syllabus

39 Hours

Course Description

The Cisco Certified Entry Networking Technician (CCENT) certification validates the skills required for entry-level network support positions, the starting point for many successful careers in networking. CCENT certified professionals have the knowledge and skill to install, operate, and troubleshoot a small enterprise branch network, including basic network security. It opens doors to a career in networking; having a CCENT verifies that an individual has what it takes to manage a small, enterprise branch network. This course covers the objectives for the exam:

- **100-105 ICND1**

Learning Objectives

Upon completion of the course, students will understand:

- Characteristics of a network, host-to-host communications, and role switches play in a network
- OSI models, TCP/IP stack and characteristics of a network, and need for switches within local area networks (LANs) while introducing Cisco IOS which is the software running on Cisco IOS routers and switches
- How IOS routers and switches can be managed and maintained using the IOS CLI
- Ethernet LAN media, functions of a switch, and how to troubleshoot communication issues with a structured plan
- Different types of Ethernet connections and cables that are available; addressing what is needed for Ethernet communication within a LAN
- How a router fits into the network infrastructure, how a router makes forwarding decisions, and how to build a network diagram using IOS commands
- How to configure, manage, and verify various aspects of an IOS router
- Host-to-host communication works in a LAN and between different LANs; how to configure static routes
- How to implement and verify NAT, PAT, and NTP; differences between static NAT, dynamic NAT, and PAT
- How to create and assign VLANs, implement Trunks, and deploy Inter-VLAN routing; best practice configurations for each
- Configuring a management IP address, a default gateway, and a hostname for a Catalyst IOS 2960 switch
- Describe, implement, and configure security on a catalyst IOS switch; implement error-disabled port automatic recovery

Course Format

CCENT is a self-paced, online course delivered through the learning management system Skillsoft. The site to access the coursework is su.skillport.com. Login credentials will be provided to you on the cohort launch date. If you do not receive them by the launch date, please check your Spam/Junk folder of your email and/or contact your advisor or O2O program coordinator. Once you have logged into your account, you can locate the coursework by selecting "View My Learning Plan."

Coursework is delivered through videos, tutorials, and tests. No textbooks are required for the course; however, students are encouraged to utilize additional resources to assist with certification preparation. Resource Guides with lists of supplemental study materials for each certification are available at <http://libguide.get-vet.syr.edu/curriculum/>.

Course Completion Requirements

CCENT coursework is due within 90 days from the assignment date. The course hours listed at the top of the syllabus reflect the time it would take to click through the slides and do not account for taking notes or the end of module tests. You must complete all 14 modules listed within Topic 1. Successful completion of a module is marked after you review the lesson videos and score 80% or higher on the end of module tests.

At the beginning of a module, you will be asked to take a pre-test. Scoring 80% or higher on the pre-test signifies competence in the information that will be covered; you will therefore be waived from completing the module. A non-credit certificate of completion will be awarded for successful completion of the coursework.

Industry Certification Requirements

In order for the program to fund your CCENT certification exam you will need to meet the CCENT practice exam requirements. Your advisor or O2O program coordinator will provide you with access to the practice exam as well as completion instructions once you have finished the coursework.

Support

- For technical support, please contact Skillsoft Support at support.skillsoft.com
- For course content support, please utilize Skillsoft's "Ask My Mentor" tool, located in the left-hand Menu within the module course player
- For program support or questions, please contact your advisor or O2O program coordinator

Course Outline

Topic 1: Server Technology Fundamentals

- 1.1 Cisco ICND1 3.0: An Introduction to Networking and CISCO IOS
- 1.2 Cisco ICND1 3.0: Managing Switches and Routers with CISCO IOS
- 1.3 Cisco ICND1 3.0: Discovering Ethernet and Troubleshooting Methodologies
- 1.4 Cisco ICND1 3.0: The Internet, Transport, and Application Layers
- 1.5 Cisco ICND1 3.0: Mastering IPv4 Addressing and Subnetting
- 1.6 Cisco ICND1 3.0: Discovering Cisco IOS Routers
- 1.7 Cisco ICND1 3.0: Understanding Host-to-Host Communication and Implementing Static Routing
- 1.8 Cisco ICND1 3.0: IPv4 Access Control Lists
- 1.9 Cisco ICND1 3.0: IPv4 Private to Public Network Address Translation
- 1.10 Cisco ICND1 3.0: VLANs, Trunking, and Inter-VLAN Routing
- 1.11 Cisco ICND1 3.0: Implementing DHCP and RIPv2
- 1.12 Cisco ICND1 3.0: Securing Management Access on an IOS Device
- 1.13 Cisco ICND1 3.0: Implementing Port Security and Managing the Cisco IOS
- 1.14 Cisco ICND1 3.0: Introducing IPv6