



Implementing Cisco Wireless Network Fundamentals (WIFUND) v1.0

This course is designed to help students prepare for the CCNA-Wireless certification, an associate level certification specializing in the wireless field. The WIFUND course and CCNA-Wireless certification is a prerequisite to the CCNP-Wireless (Cisco Certified Wireless Professional) curriculum. The CCNA-Wireless curriculum will prepare wireless network associate for the use, positioning, planning, implementation and operation of Cisco WLAN networks. The goal of the WIFUND v3.0 is to provide students with information and practice activities to prepare them to help design, install, configure, monitor and conduct basic troubleshooting tasks of a Cisco WLAN in SMB and Enterprise installations. As an associate level, the course aims at providing entry level information, and will not specialize in any of the advanced features of the Cisco WLAN networks solutions.

Course Objectives

Upon completing this course, the student will be able to meet these objectives:

- Understand the basic RF principles and characteristics
- Understand WLAN security methods and access with different client devices
- Define the Cisco WLAN architecture and the underlying infrastructure used to support it
- Implement a Centralized wireless access network using AireOS or IOS-XE converged access switches and wireless LAN controllers
- Implement a Converged wireless access network using IOS-XE converged access switches and wireless LAN controllers
- Implement small and remote access wireless networks using FlexConnect, Autonomous or Cloud architectures
- Perform basic WLAN maintenance and troubleshooting
- Describe the requirements for a WLAN design

Who Should Attend

The primary audience for this course is as follows:

- Network Engineers
- Network Administrators
- Network Managers
- System Engineers

Prerequisites

The knowledge and skills that a learner must have before attending this course are as follows:

- Interconnecting Cisco Networking Devices Parts 1 & 2 (ICND1 & ICND2), or
- Cisco CCENT certification

Course Outline

Module 1: Wireless Fundamentals

- Explain Wireless Fundamentals
- Describe RF Principles
- Understand RF Mathematics
- Describe Antenna Characteristics
- Describe the Basics of Spread Spectrum
- Describe Wireless Media Access
- Describe Wireless Governance

Module 2: Security and Client Access

- Describe Wireless Security Components
- Explain 802.11 Security
- Explain 802.1X/EAP
- Describe EAP Authentication
- Describe WPA and WPA2 Security
- Provide Guest Access
- Native Operating Systems for WLAN Connectivity
- Configure Smart Handheld Clients

Module 3: Define the Cisco Wireless Network Architecture

- Define Cisco / Meraki Wireless Network Deployment Options
- Define One Management



Associated Certifications

CCNA Wireless

Required Exam(s)

200-355

Price

\$3,495.00

Duration

5 days

Methods of Delivery

- Instructor Led
- Distance Learning
- On-Site

Module 3: Define the Cisco Wireless Network Architecture (Cont)

- Define One Policy
- Define the Cisco One Network
- Mobility Architecture Concepts
- Optimize RF Conditions and Performance for Clients
- Describe Layer 2 Infrastructure Support
- Describe Protocols Used in Wired Infrastructure to Support Wireless

Module 4: Implement Centralizes Wireless Access

- Initialize a Centralized WLC
- Describe AP Initialization
- Explore Additional WLC Features
- Implement IPv6 in a Cisco Wireless Environment
- Configure Client Access
- Implement Roaming in the Centralized Architecture

Module 5: Implement Converged Wireless Access

- Initialize a Converged WCM
- Describe AP Connectivity
- Explore Additional Wireless Features
- Configure Client Access
- Implement Roaming in the Converged Architecture

Module 6: Implement Small and Remote Wireless Access

- Overview of the FlexConnect Architecture
- Overview of the Autonomous Architecture
- Overview of the Cloud Architecture with Meraki

Module 7: WLAN Maintenance and Troubleshooting

- Describe Wireless Maintenance
- Explain Troubleshooting Tools
- Describe Troubleshooting Methodology

Module 8: WLAN Design

- Predictive WLAN Design Process
- WLAN Site Survey Process

LABS

- Configure Windows 7 Client Access
- Configuring the Wired Infrastructure
- Configuring the Centralized WLAN Deployment
- Configuring IPv6 Operation in a Centralized WLAN Deployment
- Configuring Security in a Centralized WLAN Deployment
- Configuring Guest Access Using the Anchor WLC
- Deploying a Converged Access WLAN
- Configuring Security on a Converged WLAN Deployment
- Implement a FlexConnect WLAN Deployment
- Initialize an Autonomous WLAN Deployment
- Configure Security on an Autonomous AP WLAN Deployment
- Configure Security on a Cloud WLAN Deployment
- Perform Centralized Controller Maintenance
- Perform Wi-Fi Scanning
- Challenge—Various Trouble Tickets
- Perform a Predictive WLAN Design
- Perform Passive Site Survey Analysis