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## Cisco Unified Wireless Networking v6.0

Keyword: CUWN

4 Days – List Price \$2,795

### Course Description

Through instructor-led training and in-depth instructor-assisted hands-on labs, this advanced course is designed to give you a firm understanding of Cisco's Unified Wireless Network. In this course is based on lightweight access points and controllers, you will learn to design, install, configure, and maintain a wireless network both as an add-on to an existing wireless LAN and as a new Cisco Unified Wireless Network solution. **GigaWave's version of this class provides hands-on labs which cover controller firmware release 6.0 as well as Cisco Wireless Control System (WCS) software release 6.0. All labs are hands-on labs, a better experience for the engineer.**

After a quick overview of the solution, you will investigate components, features, and deployment of the system. Reinforce what you learn with hands-on labs covering such lessons as CLI and controller web configuration tools. You will configure the Cisco Unified Wireless Network solution for open and web authentication, 802.1X/EAP authentication, and 802.11i/WPA/WPA2 encryption for the client, access point, and the WLAN controller. You will also explore Cisco WCS, and you will reinforce what you learn about this comprehensive tool in hands-on configuration labs covering topics such as managing the WLAN controller using WCS, using WCS templates, creating admin accounts, configuring the WLAN controller, importing and working with maps, and using WCS to perform administrative functions on the deployed wireless network. Finish up by learning to maintain a WLAN using the Cisco Unified Wireless Network solution. You will explore unique product features and standard maintenance procedures as well as detailed troubleshooting methodologies and debugging tools.

Laptops are provided to participate in the labs. If you desire to use your own laptop, please bring a laptop computer with an available 32-bit CardBus slot and an Ethernet port as well as an internal wireless NIC, 802.11a/b/g. The laptop's operating systems must be either MS Windows 2000 (SP4) or XP. The laptop should also have a 9-pin serial port or USB to serial adapter. IN ADDITION, you will need administrator rights to the laptop to install drivers for the wireless client used in class.

### You Learn...

After completing this course, the student should be able to:

- Identify key enterprise WLAN implementation challenges and solutions as well as products offered by Cisco to support the network
- Select and properly install the Cisco Unified Wireless Network hardware appropriate to site and use requirements
- Administer WLANs, 802.11 security policies, and QoS appropriately to protect and optimize performance on the wireless network
- Configure and implement the key Cisco Unified Wireless Network security features to mitigate WLAN threats
- Use recommended troubleshooting methodology and various tools available to gather and assess system data to isolate equipment failures and security threats
- Administer, update, back up, restore, and use the Cisco WCS to monitor Cisco Unified Wireless Network equipment performance

- Configure and use the Cisco WCS location tracking feature and the Cisco Mobility Services Engine as appropriate to locate users within a Cisco Unified Wireless Network environment

**Who Would Benefit**

This course is designed for Cisco customers, employees, channel partners and resellers, interested in the Cisco Unified Wireless Network solution, that have a strong data networking background who will be responsible for the planning, deploying and managing enterprise WLAN using lightweight access points and controllers.

**Prerequisite**

- Students needs RF Theory and FCC Regulations understanding
- Needs experience installing Cisco Autonomous APs

**Follow-On Courses**

- Conducting Cisco Unified Wireless Site Survey (CUWSS)
- Implementing Cisco Advanced Unified Wireless Security (IAUWS)
- Implementing Cisco Unified Wireless Mobility Services (IAUMS)
- Implementing Cisco Unified Wireless Voice Networks (IUWVN)

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### Course Content

#### Module 1 - Cisco Unified Wireless Network Introduction

- Enterprise WLAN Solutions
- Describing the Hardware
- Terminology and Lightweight Access Point Communication Protocols

#### Module 2 – Cisco Unified Wireless Network Hardware Installation

- Configure the Controller Setup
- Configure Controller Settings
- Link Aggregation
- Describing Access Point Operational Modes
- 802.11 Protocols, Performance, Optimization and Auto RF

#### Module 3 – Cisco Unified Wireless Network Administration

- AP Association – Finding a Controller
- Roaming
- WLAN Administration
- Quality of Service
- General Network Communications
- 802.11 Weak Security Policy

#### Module 4 – WLAN Security

- Security Configuration
- Configuring the WLAN to Support 802.1X Authentication

#### Module 5 – WLAN Maintenance and Troubleshooting

- WLAN Troubleshooting
- Gathering VLAN Traffic and Data
- WLAN Policies and Management
- Device Code and Configuration Management

#### Module 6 – Cisco Wireless Control System

- Cisco Wireless Control System Overview
- Cisco WCS Installation
- Cisco WCS Administration
- Cisco WCS Configuration Tab
- Cisco WCS Monitor Tab
- Cisco WCS Reports
- Cisco WCS Maps and Planning
- Cisco WCS Guest Access Features
- Cisco WCS Navigator for Enterprise Management

#### Module 7 – Cisco Location Tracking

- Cisco WCS Location Tracking
- Cisco Mobility Services Engine

#### Hands-on Labs

- Cisco Wireless LAN Controller Setup
- Controller Web Interface
- Configuring Lay 3 Options
- Configuring Web Authentication
- Configuring PEAP Authentication with WPA2 Encryption
- Configuring Local EAP-Based EAP-FAST Authentication with WPA
- Managing the WLAN with Cisco WCS