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## Implementing Unified Wireless Networking Essentials

**Duration: 5 Days**    **Course Code: IUWNE**    **Version: 2.0**

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### Overview:

The Implementing Cisco Unified Networking Essentials is a five day ILT course, designed to help students prepare for the CCNA Wireless certification, an associate level certification specialising in the wireless field. The goal of IUWNE is to provide students with the information and practice activities necessary to prepare them for designing, installing, configuring, monitoring and conducting basic troubleshooting tasks on a Cisco WLAN in SMB and Enterprise installations. This is an associate level course and as such aims to provide only entry level information, and does not specialise in any of the advanced features of the Cisco WLAN networks solutions.

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### Target Audience:

The primary audience is those individuals interested in gaining an overview of a Cisco WLAN and the technologies that can be deployed within that Network. It is an ideal course for those that are new to wireless and are looking to gain the 1st level of wireless certification.

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### Objectives:

- **After you complete this course you will be able to:**
  - Describe the fundamentals of wireless networks
  - Install a Cisco Unified Wireless Network
  - Describe and configure a basic wireless client using either the default operating system or Cisco Wireless LAN (WLAN) adapter configuration utilities
  - Configure wireless security
  - Manage the wireless network with Cisco WCS
  - Maintain and troubleshoot a wireless network
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### Prerequisites:

#### Attendees should meet the following prerequisites:

- Prior Attendance of ICND1 - Interconnecting Cisco Network Devices Part 1 is recommended
- It is also recommended that before attending this training delegates would have a basic knowledge of Cisco lifecycle deployment, SONA, Wireless standards (IEEE), wireless regulator environment (FCC, ETSI, etc) and wireless certification organisation (WIFI alliance)

### Testing and Certification

#### Recommended as preparation for exam(s):

- **640-722** IUWNE Implementing Cisco Unified Wireless Networking Essentials

*Delegates wishing to obtain the CCNA Wireless Certification will also need to have passed the ICND1 exam.*

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### Follow-on-Courses:

Delegates who wish to focus on wireless certifications may wish to consider the courses below, all of which are required for the Cisco Certified Network Professional for Wireless Certification.

- CUWSS- Conducting Cisco Unified Wireless Site Survey
  - IAUWS - Implementing Advanced Cisco Unified Wireless Security
  - IUWMS -Implementing Cisco Unified Wireless Mobility Services
  - IUWVN -Implementing Cisco Unified Wireless Voice Networks
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## Content:

### Wireless Fundamentals

- Describing Wireless Networks and Topologies
- Describing WLAN RF Principles
- Describing RF Mathematics
- Describing Antennas
- Describing Spread Spectrum Technologies
- Describing Wireless Regulation Bodies, Standards, and Certifications
- Examining Wireless Media Access
- Examining Non-802.11 Wireless Technologies and Their Impact on WLANs
- Reviewing the Wireless Frame Journey: End to End
- Identifying Design and Site-Survey Considerations

### Basic Cisco WLAN Installation

- Understanding Cisco Unified wireless Network Basics Architecture
- Configuring a controller
- Discovering and associating with a controller
- Describing Access Point Operational Modes
- Roaming
- Managing the network from the controller
- Configuring and migrating stand-alone access points

### Wireless Clients

- Using default configuration tools
- Configuring the Cisco AnyConnect Secure Mobility Client
- Understanding the Cisco Compatible extensions program

### WLAN Security

- Describing WLAN Security Components
- Establishing IEEE 802.11 Security
- Centralizing WLAN Authentication
- Describing EAP Authentications
- Managing authentication and encryption through WPA and WPA2
- Configuring Wireless Security on Controllers and Clients

### WCS Administration

- Introducing Cisco WCS and Cisco Navigator
- Navigating the Cisco WCS Interface
- Working with controllers from WCS
- Working with Preconfigured Maps
- Monitoring the network with WCS
- Working with Cisco CleanAir in Cisco WCS

### WLAN Maintenance and Troubleshooting

- Maintaining the System
- Troubleshooting a Wireless Network

### Labs

- Lab 1-1: Becoming Familiar with Antennas and Ranges
- Lab 1-2: Creating an Ad Hoc IBSS Network and Analyzing the Communication
- Lab 2-1: Configuring a Cisco 2504 WLC
- Lab 2-2: Downgrading a Controller-Based AP to an Autonomous AP
- Lab 3-1: Configuring Cisco AnyConnect Secure Mobility Client
- Lab 3-2: Experiencing Connections and Roaming
- Lab 4-1: Configuring WLC PSK Authentication
- Lab 4-2: Configuring Cisco Autonomous Access Point PSK Authentication
- Lab 4-3: Configuring EAP-FAST Authentication with WPA
- Lab 4-4: Configuring 802.1Q and Web Authentication
- Lab 5-1: Configuring Controllers and APs from Cisco WCS
- Lab 5-2: Working with Cisco WCS
- Lab 5-3: Monitoring the Network and Containing Devices
- Lab 6-1: Backing Up the Cisco WLC Configuration Files
- Lab 6-2: Troubleshooting
- Lab 6-3: Troubleshooting with Wireshark and Converting an Autonomous AP to WLC Mode

## Additional Information:

### Re-Certification

CCNA Wireless certifications are valid for three years. To recertify, pass ONE of the following before the certification expiration date: Pass the current IUWNE exam, or Pass any current Associate-level exam except for ICND1 exam, or Pass any current Cisco Specialist exam (excluding Sales Specialist exams or MeetingPlace Specialist exams, Implementing Cisco TelePresence Installations (ITI) exams, Cisco Leading Virtual Classroom Instruction exams, or any 650 online exams), or Pass any current CCIE Written Exam, or Pass the current CCDE Written Exam OR current CCDE Practical Exam, or Pass the Cisco Certified Architect (CCAR) interview AND the CCAR board review to extend lower certifications

## Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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