

## COURSE OVERVIEW:

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Gain the knowledge you need to plan advanced designs of Cisco wireless products, Qualify for professional-level job roles in wireless networking. In this 5-day course, Designing Cisco Enterprise Wireless Networks (ENWLSD) v1.0, students will gain the knowledge needed to design Cisco wireless networks. The course covers design specifics from scenario design concepts through the installation phase and into post-deployment validation.

This course prepares students to take the exam, Designing Cisco Enterprise Wireless Networks (300-425 ENWLSD), which leads to the new CCNP Enterprise and Cisco Certified Specialist – Enterprise Wireless Design certifications. The exam will be available beginning February 24, 2020.

## PREREQUISITES:

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The knowledge and skills that a student must have before attending this course are:

- General knowledge of networks
- General knowledge of wireless networks
- Routing and switching knowledge

## COURSE OBJECTIVES:

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

- Describe and implement a Cisco-recommended structured design methodology
- Describe and implement industry standards, amendments, certifications, and Requests For Comments (RFCs)
- Describe and implement Cisco enhanced wireless features
- Describe and implement the wireless design process
- Describe and implement specific vertical designs
- Describe and implement site survey processes
- Describe and implement network validation processes



## WHO SHOULD ATTEND:

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The primary audience for this course is as follows:

- Consulting systems engineer
- Network administrator
- Network engineer
- Network manager
- Sales engineer
- Systems engineer
- Technical solutions architect
- Wireless design engineer
- Wireless engineer

## COURSE OUTLINE:

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### **Module 1: Describing and Implementing a Structured Wireless Design Methodology**

- Importance of Planning Wireless Design with a Structured Methodology
- Cisco Structured Design Model
- Cisco Design Guides and Cisco Validated Designs for Wireless Networks
- Role of the Project Manager When Designing Wireless Networks

### **Module 2: Describing and Implementing Industry Protocols and Standards**

- Wireless Standards Bodies
- Institute of Electrical and Electronics Engineers (IEEE) 802.11 Standard and Amendments
- Wi-Fi Alliance (WFA) Certifications
- Relevant Internet Engineering Task Force (IETF) Wireless RFCs
- Practice Activity

### **Module 3: Describing and Implementing Cisco Enhanced Wireless Features**

- Hardware and Software Choices for a Wireless Network Design
- Cisco Infrastructure Settings for Wireless Network Design
- Cisco Enhanced Wireless Features



## **Module 4: Examining Cisco Mobility and Roaming**

- Mobility and Intercontroller Mobility in a Wireless Network
- Optimize Client Roaming in a Wireless Network
- Cisco Workgroup Bridge (WGB) and WGB Roaming in a Wireless Network

## **Module 5: Describing and Implementing the Wireless Design Process**

- Overview of Wireless Design Process
- Meet with the Customer to Discuss the Wireless Network Design
- Customer Information Gathering for a Wireless Network Design
- Design the Wireless Network
- Deployment of the Wireless Network
- Validation and Final Adjustments of the Wireless Network
- Wireless Network Design Project Documents and Deliverables

## **Module 6: Describing and Implementing Specific Vertical Designs**

- Designs for Wireless Applications
- Wireless Network Design Within the Campus
- Extend Wireless Networks to the Branch Sites

## **Module 7: Examining Special Considerations in Advanced Wireless Designs**

- High-Density Designs in Wireless Networks
- Introducing Location and Cisco Connected Mobile Experiences (CMX) Concepts
- Design for Location
- FastLocate and HyperLocation
- Bridges and Mesh in a Wireless Network Design
- Redundancy and High Availability in a Wireless Network

## **Module 8: Describing and Implementing the Site Survey Processes**

- Site Survey Types
- Special Arrangements Needed for Site Surveys
- Safety Aspects to be Considered During Site Surveys
- Site Survey Tools in Cisco Prime Infrastructure
- Third-Party Site Survey Software and Hardware Tools



## Module 9: Describing and Implementing Wireless Network Validation Processes

- Post-installation Wireless Network Validation
- Making Post-installation Changes to a Wireless Network
- Wireless Network Handoff to the Customer
- Installation Report

### LAB OUTLINE:

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- Use Cisco Prime Infrastructure as a Design Tool
- Create a Predictive Site Survey with Ekahau Pro
- Perform a Live Site Survey Using Access Point on a Stick (APoS)
- Simulate a Post-installation Network Validation Survey