Wireless Fundamentals 2

Category: Networking & Security | **Vendor:** Cisco

Duration: 16.00 hours (2 days) **13.0 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

RF Advanced Topics

- Electromagnetic Spectrum
- Evolution of Wi-Fi 6
- Understanding Guard Interval
- Inverse-Square Law
- Advanced Antenna Design
- Wi-Fi RF Improvements
- Maximal Ratio Combining
- Transmit Beamforming
- Spatial Multiplexing
- Advanced Wi-Fi Modulation
- Relationship Between Modulation and SNR
- Channel Bonding

Radio Resource Management

- RRM Algorithm
- Dynamic Channel Assignment
- Dynamic Bandwith Selection
- Dynamic Frequency Selection
- Transmit Power Control
- Coverage Hole Detection and Mitigation

802.11ax / WiFi 6 / WiFi 6e

- 802.11ax
- Understanding OFDMA
- Resource Units
- OFDMA and MU-MIMO
- BSS Coloring
- 6 GHz and more

Different Wireless Deployments

- Enterprise Deployment
- High Density Deployment
- Branch Office Deployment
- Central Breakout Considerations
- Local Breakout Considerations
- Wireless Mesh
- Office Extend and Teleworkers

Advanced Wireless Security

- Types of guest access
- Advanced Wireless Security
- WPA3 Security Enhancements
- Identity PSK

High Availability

- WLC High Availability
- HA SSO
- N+1 HA
- N+N HA
- Failover Issues

Wireless Deep Dive and Analysis

- WiFi Analysis
- Wi-Fi Useful Tools
- Application Testing
- Using Wireshark to Analyze a Packet Capture
- Wireshark Filters

About This Course

RF Advanced Topics

- Electromagnetic Spectrum
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Who Should Attend

- IT staff
- Networkers
- Technicians/Electrical Engineers
- Administrators

Prerequisites & Entry Requirements

General Prerequisites:

- Wireless Fundamentals 1 (WFUN1)
- Basic knowledge of network protocols and wireless LAN beneficial, but not required

Learning Outcomes

Upon successful completion of this course, participants will be able to:

In this seminar, we will provide you with the advanced fundamentals of radio engineering and wireless technologies.

In addition, topics such as antenna design, complex modulations, SNR, RSSI, DCA, TPC, 802.11ax, WPA3, MU-MIMO, OFDMA , wireless mesh, office extend, high density, enterprise design, branch office design, use of analysis tools, use of planning and illumination tools, use of Wireshark will be covered.

The theory is accompanied with extensive practical exercises and examples from real networks as well as live demos by our WiFi experts.
The course offers a vendor-independent introduction to wireless and provides all the basic knowledge needed to prepare you to attend vendor-specific courses such as AMF and WLFNDU.

Detailed Course Outline

RF Advanced Topics: Electromagnetic Spectrum, Evolution of Wi-Fi 6, Guard Interval, Inverse-Square Law, Advanced Antenna Design, MRC, Transmit Beamforming, Spatial Multiplexing, Advanced Modulation, SNR, Channel Bonding

Radio Resource Management: RRM Algorithm, Dynamic Channel Assignment, Dynamic Bandwidth Selection, DFS, Transmit Power Control, Coverage Hole Detection

802.11ax / WiFi 6 / WiFi 6e: OFDMA, Resource Units, MU-MIMO, BSS Coloring, 6 GHz

Different Wireless Deployments: Enterprise, High Density, Branch Office, Central/Local Breakout, Wireless Mesh, Office Extend

Advanced Wireless Security: Guest access types, WPA3, Identity PSK

High Availability: WLC HA, HA SSO, N+1/N+N HA, Failover

Wireless Deep Dive and Analysis: WiFi Analysis tools, Wireshark, Application Testing

Skills You Will Learn:

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Frequently Asked Questions

Q: What delivery options are available for Wireless Fundamentals 2?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 2-day Wireless Fundamentals 2 course provides up to 13.0 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Wireless Fundamentals 2 training?

The training takes place over 2 day(s), with each day lasting approximately 16.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Wireless Fundamentals 2?

Yes, we provide corporate training, dedicated training, and closed classes for Wireless Fundamentals 2. Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: Wireless Fundamentals 2, Cisco Wireless Networking / Mobility, WFUN2

Q: Why choose Nexus Human for Wireless Fundamentals 2?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Wireless Fundamentals 2 training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

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