# Wireless Fundamentals 1

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

**Duration:** 24.00 hours (3 days) **19.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

## Course Information

**Delivery Format:** Instructor Led - Online

## Course Overview

Fundamentals of 802.11

- 802.11 and WiFi standards
- Wireless regulations and country codes
- 802.11b
- 802.11a
- 802.11g
- 802.11n
- 802.11ac
- 802.11ax
- Next Generation 802.11 Standards
- Wireless Modulation and MCS

Wireless planning and coverage

- Planning parameters for WLAN transmission
- Internal and external antennas
- Illumination measurement and simulation techniques
- 2.4GHz and 5GHz
- Capacity-oriented WLAN planning
- Coverage and mobility
- Capacity-oriented planning

Different WLAN solutions

- Autonomous access points
- Controller-based WLAN design: architectures, protocols, vendor concepts
- Cloud-based WLAN design: special features, pros/cons, vendor concepts
- Integration of WLAN in modern layer-3-based LAN infrastructures
- Mesh networks and IEEE 802.11s: design, application areas
- Virtual controllers
- Instant Access Points

Wireless LAN management

- Monitoring of the wireless interface: coverage, data rates, throughput and utilization of access points
- Detection of end device mobility
- Malfunctions and interference: Detection and countermeasures
- WLAN, Bluetooth and Zigbee
- Simple tools for daily use for smartphones and notebooks

Measurement technology for wireless LAN

- Typical measurement and analysis tasks in WLAN
- Categories of WLAN measurement technology
- WiFi spectrum analyzer

WLAN Security Basics

- Authentication
- Authorization
- Encryption
- WPA/WPA2/WPA3
- 802.11i
- Guest Portals and Web Authentication
- 802.1X/Radius/PKI concepts

Labs and demos

- Installation of Cisco Wireless LAN Controllers and Access Points
- Installation of Aruba Wireless LAN Controllers and Access Points
- Demo Cisco C9800 WLC and 91XX Access Points
- Demo Cisco Prime Infrastructure
- Demo Ekahau WiFi Planning

## About This Course

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## Who Should Attend

- IT staff
- Network engineers
- Technicians/Electrical engineers
- Administrators

## Prerequisites & Entry Requirements

**General Prerequisites:**

- Basic knowledge of network protocols and wireless LAN are advantageous, but not mandatory
- Contents of the course Networking & TCP/IP Fundamentals (NWF)

## Learning Outcomes

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

In our seminar, we will teach you the fundamentals of radio engineering and wireless technologies.

In addition, topics such as antennas, modulation, standards, media access methods, regulations, mobility, interference source detection, strategies for planning, building and operating small to large enterprise solutions will be covered.

Theory is accompanied with extensive hands-on assignments and examples from real-world networks, as well as live demos from our WiFi experts.
The course offers a vendor-independent introduction to wireless technologies and provides all the basic knowledge required for vendor-specific courses such as Understanding Cisco Wireless Foundations (WLFNDU).

## Detailed Course Outline

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**Skills You Will Learn:**

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# Frequently Asked Questions

### Q: What delivery options are available for Wireless Fundamentals 1?

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

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### Q: How many CPD hours does this course provide?

The 3-day Wireless Fundamentals 1 course provides up to 19.5 CPD hours of structured learning. CPD certificates can be provided upon request.

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### Q: What is the duration of the Wireless Fundamentals 1 training?

The training takes place over 3 day(s), with each day lasting approximately 24.00 hours including breaks for lunch and refreshments.

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### Q: Do you provide corporate training for Wireless Fundamentals 1?

Yes, we provide corporate training, dedicated training, and closed classes for Wireless Fundamentals 1. 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.

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### Q: What related terms do people search for?

Popular related searches include: Wireless Fundamentals 1, Cisco Wireless Networking / Mobility, WFUN1

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### Q: Why choose Nexus Human for Wireless Fundamentals 1?

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

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### Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Wireless Fundamentals 1 training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.


## Nexus Human

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