

# COURSE OUTLINE: Certified Wireless Technology Specialist



## COURSE DURATION

1 day

## DELIVERY METHOD

Virtual Instructor-led training.

## REGISTRATION

[Click and check calendar](#)

## COURSE OVERVIEW

Throughout this course, you will gain a fundamental understanding of wireless networks, their operation, and essential security practices. The course is designed in a sequential manner to ensure a smooth learning experience. You will start with basic wireless concepts such as RF fundamentals, wireless standards, and WLAN components. As you progress, you will learn about wireless security principles, basic troubleshooting, and best practices for setting up and maintaining wireless networks. In this course you will learn all the essential topics to build a strong foundation in wireless networking, preparing you for the CWTS certification exam.

## WHO SHOULD ATTEND

Entry-level IT Professionals.  
Wireless Sales and Marketing Professionals.  
Help Desk Support Staff.  
Network Support Technicians.  
Individuals seeking a foundation in wireless networking.

## MANDATORY PREREQUISITE

No prior experience with wireless networking is required. However, basic knowledge of general networking concepts and technologies is helpful.

## COURSE OBJECTIVES

The Certified Wireless Technology Specialist (CWTS) understands the fundamental concepts and terminology of wireless networking. Responsibilities include understanding wireless LAN basics, hardware, standards, security principles, and troubleshooting methods.

After completing this course, you will be able to:

1. Understand the basics of RF (Radio Frequency) technologies and wireless communications.
2. Describe WLAN hardware and basic WLAN architectures.
3. Identify the roles of industry organizations and standards bodies related to wireless networking.
4. Understand wireless security basics, including authentication and encryption methods.



## COURSE OBJECTIVES

5. Recognize wireless LAN design principles and best practices.
6. Describe the common issues in WLAN environments and basic troubleshooting techniques.
7. Understand the IEEE 802.11 standards and the Wi-Fi Alliance certifications.
8. Support wireless users with basic troubleshooting and configuration advice.

## AGENDA

### Wireless Networking Industry Organizations

- IEEE, Wi-Fi Alliance, FCC, IETF
- Wireless LAN standards and certifications
- Regulatory domains and compliance

### RF Fundamentals

- Introduction to RF Spectrum
- Properties of RF Signals: Frequency, Wavelength, Amplitude
- Basics of Signal Propagation
- RF Interference and Mitigation

### WLAN Technologies and Standards

- IEEE 802.11 Overview
- Wi-Fi generations (a/b/g/n/ac/ax basics)
- WLAN topologies: BSS, ESS, IBSS
- Components of a Wireless LAN: APs, Clients, Controllers

### WLAN Hardware and Software

- Access Points (APs) and their roles
- Wireless Controllers and Management Systems
- Client Devices and Adapters
- Power over Ethernet (PoE) basics

### Wireless Security Basics

- Security Threats and Vulnerabilities in WLANs
- Authentication and Encryption Techniques (WPA2, WPA3 Basics)
- Role of RADIUS and EAP in Wireless Security

### WLAN Design and Site Considerations

- Coverage and Capacity Planning
- Site Surveys and RF Planning Fundamentals
- Channel Planning and Interference Management

### Troubleshooting Wireless Networks

- Common WLAN Problems
- Basic Troubleshooting Tools and Methods
- Understanding Connection Issues and Interference Problems