

Module 1: Fundamentals of Wireless Networking

Introduction to wireless communication

Radio frequency fundamentals

Modulation techniques

Overview of wireless standards and protocols

Module 2: Mastering RF and WLAN Planning

Understanding RF signals and modulation

Antennas and RF mathematics

Complying with radio frequency regulations and standards

Analyzing signal measurements and conducting spectrum analysis

Effective WLAN coverage planning with access point placement

Module 3: Securing WLAN and Ensuring Client Connectivity

Identifying and mitigating common wireless security threats

Implementing robust WPA and WPA2 encryption

Managing encryption keys with efficiency and security

Establishing secure WLAN access with 802.1X authentication

Seamless client connectivity and roaming in wireless networks

Module 4: Troubleshooting and Optimizing Wireless Networks

Methodical WLAN troubleshooting techniques

Analyzing and resolving WLAN issues effectively

Monitoring wireless client connectivity problems

Efficient WLAN management with powerful tools

Implementing WLAN Quality of Service (QoS) for optimal performance

Module 5: Advanced Wireless Services and Cisco Insights

Leveraging advanced wireless services for network enhancement

Balancing loads and steering bands for seamless connectivity

Best practices for high-density WLAN environments

Understanding Cisco Unified Wireless Network (CUWN) architecture

Streamlining operations with centralized WLAN architecture.