KOENIG SOLUTIONS · COURSE OUTLINE

Advanced Wireless: WPA3, CUWN & RF Analysis

Learn to analyse RF spectrum, secure WLANs with WPA3, and deploy and optimise Cisco Unified Wireless Networks.

5	14	5
MODULES	TOPICS	HANDS-ON ACTIVITIES

COURSE OVERVIEW

This course covers advanced RF signal principles, antennas, RF mathematics and spectrum analysis using professional tools. It then addresses strengthening WLAN security through WPA3, advanced encryption and authentication techniques, followed by advanced troubleshooting and performance optimisation methods for WLANs. It also covers Cisco Unified Wireless Network architecture, including configuring controllers, access points and wireless services, and closes with advanced WLAN services and location-based solutions.

WHO THIS COURSE IS FOR

- **Network Engineers**
- **Wireless Engineers**
- **Security Engineers**
- **Network Administrators**
- **RF Engineers**

LEARNING OBJECTIVES

- Explain advanced RF signal and modulation principles
- Analyse antennas and RF mathematics for wireless design
- Apply spectrum analysis using professional tools
- Implement WPA3 and advanced encryption for WLAN security
- Evaluate authentication techniques for enhanced security
- Identify and resolve complex WLAN troubleshooting challenges
- Apply WLAN performance optimisation techniques
- Configure CUWN controllers, access points and wireless services

COURSE SYLLABUS

5 Modules, 14 Topics

01

Hands-on lab

Fundamentals of RF Signals and Spectrum Analysis

TOPICS

- Advanced principles of RF signals and modulation
- In-depth study of antennas and RF mathematics
- Practical spectrum analysis using professional tools

02

Hands-on lab

Strengthening WLAN Security and Authentication

TOPICS

- Fortifying networks against sophisticated security threats
- Implementing cutting-edge WPA3 and advanced encryption
- Exploring robust authentication techniques for enhanced security

03

Hands-on lab

Advanced WLAN Troubleshooting and Optimization

TOPICS

- Advanced methodologies for WLAN troubleshooting
- Identifying and resolving complex WLAN challenges
- Implementing performance optimization techniques

04

Hands-on lab

Cisco Unified Wireless Network (CUWN) Deployment Strategies

TOPICS

- Understanding the intricacies of CUWN architecture
- Configuring controllers, access points, and wireless services

05

Hands-on lab

Harnessing Advanced WLAN Services and Location-Based Solutions

TOPICS

- Leveraging advanced wireless network services
- Exploring the potential of location-based solutions
- Implementing high-level WLAN services for network enhancement

HANDS-ON ACTIVITIES

Practise What You Learn

#	MODULE	ACTIVITY
01	**Fundamentals of RF Signals and Spectrum Analysis**	Analyzing RF signals and interference
02	**Strengthening WLAN Security and Authentication**	Configuring advanced WLAN security measures
03	**Advanced WLAN Troubleshooting and Optimization**	Troubleshooting real-world WLAN scenarios
04	**Cisco Unified Wireless Network (CUWN) Deployment Strategies**	Setting up a Cisco Unified Wireless Network
05	**Harnessing Advanced WLAN Services and Location-Based Solutions**	Integrating advanced WLAN services

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

Learn the Way That Suits You

Classroom Training | Live Online Classes (ILO) | Fly-Me-A-Trainer (FMAT) | Flexi (Self-Paced) | 1-on-1 Training

Ready to Get Started?

Talk to a learning advisor about schedules, group training and customised delivery.

Visit koenig-solutions.com | info@koenig-solutions.com