€TRAINING

Wireless Engineering

17 - 21 February 2025
Amsterdam (Netherlands)

Wireless Engineering

REF: B2668 DATE: 17 - 21 February 2025 Venue: Amsterdam (Netherlands) - Fee: 6145 Euro

Introduction:

This training program is designed to provide participants with an in-depth understanding of wireless engineering concepts, technologies, and best practices. It aims to equip professionals with the skills needed to design, implement, and troubleshoot wireless networks effectively. This program will cover various aspects of wireless communication, including network planning, security, and performance optimization.

Program Objectives:

At the end of this program, participants will be able to:

- Understand the fundamental principles of wireless communication and networking.

- Design and implement efficient wireless network solutions.

- Troubleshoot common wireless network issues and optimize performance.

- Apply best practices for wireless network security and management.

- Stay updated with the latest advancements and technologies in wireless engineering.

Targeted Audience:

- Wireless network engineers.

- Network administrators and IT professionals.

- System integrators and consultants.

- IT managers and decision-makers involved in network planning and deployment.

Program Outline:

Unit 1:

Introduction to Wireless Engineering:

- Overview of wireless communication technologies.

- Fundamental principles of radio frequency RF and wireless networking.

- Key components of wireless networks: access points, routers, and antennas.

- Understanding wireless communication standards and protocols Wi-Fi, Bluetooth, LTE.

Unit 2:

Wireless Network Design and Planning:

- Steps for Designing wireless networks for various environments indoor, outdoor, urban, rural.
- Approaches for Conducting site surveys and signal propagation analysis.
- Planning for capacity, coverage, and performance.
- Methods of Selecting appropriate hardware and technologies for network deployment.

Unit 3:

Wireless Network Implementation and Configuration:

- Ways of Setting up and configuring wireless access points and controllers.
- Approaches for Implementing wireless network infrastructure VLANs, SSIDs, security settings.
- Integrating wireless networks with existing wired infrastructure.
- Performing network testing and validation.

Unit 4:

Wireless Network Security and Management:

- Identifying and mitigating common wireless security threats unauthorized access, eavesdropping.
- Implementing security protocols and encryption methods WPA3, VPNs.
- Managing wireless networks and troubleshooting performance issues.
- Monitoring and maintaining wireless network health and performance.

Unit 5:

Advanced Topics and Future Trends in Wireless Engineering:

- Exploring emerging wireless technologies 5G, IoT, Wi-Fi 6.
- Understanding the impact of new technologies on network design and management.
- Adapting to evolving industry standards and best practices.

- Planning for future upgrades and scalability.