5G and ORAN: Mastering Next-Gen Mobile Networks

Telecom Engineering
Istanbul (Turkey)
15 - 19 Mar 2026

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5G and ORAN: Mastering Next-Gen Mobile Networks

Ref: 321712_144629 **Date:** 15 - 19 Mar 2026 **Location:** Istanbul (Turkey) **Fees:** 3900 **Euro**

Course Description

This comprehensive 5-day course provides in-depth knowledge of 5G and Open Radio Access Network ORAN technologies. Participants will explore 5G architecture, ORAN principles, interfaces, and deployment strategies. The course combines theoretical concepts with practical hands-on sessions, enabling attendees to gain real-world skills in implementing and optimizing 5G ORAN networks.

Learning Objectives

- Understand 5G architecture and its key components
- Master ORAN principles, architecture, and interfaces
- Develop skills in deploying and optimizing 5G ORAN networks
- Gain hands-on experience with ORAN implementation and troubleshooting
- Learn about emerging trends and future developments in 5G and ORAN

Course Modules

Day 1: Introduction to 5G and ORAN

- 5G architecture overview
- Evolution from traditional RAN to ORAN
- ORAN Alliance and ecosystem
- Key drivers and benefits of ORAN

Day 2: ORAN Architecture and Interfaces

- ORAN reference architecture
- Open Fronthaul specifications
- RAN Intelligent Controller RIC
- O-CU, O-DU, and O-RU components

Day 3: ORAN Deployment Strategies

- Virtualization and cloud-native principles
- Network slicing in ORAN
- Integration with 5G Core
- Security considerations in ORAN

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Day 4: ORAN Implementation and Optimization

- xApps and rApps development
- AI/ML in ORAN for network optimization
- Performance management and monitoring
- Troubleshooting ORAN networks

Day 5: Advanced Topics and Future Trends

- Open RAN testing and certification
- Emerging use cases for ORAN
- Beyond 5G: 6G and future radio technologies
- Hands-on project: ORAN network design

Practical Wins for Participants

- Ability to design and deploy 5G ORAN networks
- Hands-on experience with ORAN interfaces and components
- Skills to develop and optimize xApps and rApps
- Understanding of AI/ML applications in ORAN for network enhancement

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