XCELERATE TRAINING INSTITUTE

your learning & development partner

TELECOMMUNICATION

Telecom Radio Network (RN) L1 to L3

DURATION	LANGUAGE	FORMAT
5 days	English	Classroom / Online

Upcoming dates

Dates	Venue	Format	Fee
14 – 18 Jun 2027	Live online	Online (live)	€1,200
19 – 23 Jul 2027	Amman	Classroom	€4,800
20 – 24 Dec 2027	Live online	Online (live)	€1,200

Register or ask a question

Online: x8ti.com/course/telecom-radio-network-rn-l1-to-l3/

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Telecom Radio Network (RN) L1 to L3

Introduction

This comprehensive course by Xcelerate Training Institute provides a deep dive into radio network fundamentals. It covers the evolution of mobile networks, radio frequency principles, cellular concepts, and network architecture. The course also explores key technologies like GSM, WCDMA, LTE, and Wi-Fi, as well as their integration and interoperability.

Learning Objectives

Upon completion, participants will gain a solid understanding of radio network fundamentals, including network architecture, radio frequency principles, and cellular concepts. They will be able to analyze network performance, identify optimization opportunities, and contribute to network planning and design.

Training Methodology

The course combines theoretical knowledge with practical examples to provide a comprehensive learning experience. Participants will engage in interactive discussions, case studies, and hands-on activities to apply their knowledge.

Benefits for Your Organisation

Organizations investing in this course can expect improved network performance, optimized resource utilization, and enhanced network planning capabilities.

Benefits for You

Individuals will develop a strong foundation in radio network engineering, expanding their career opportunities in the telecommunications industry.

Who Should Attend

This course is designed for engineers and technical professionals involved in the planning, design, and operation of radio networks.

Course Outline

Introduction to Telecom Radio Networks

Basics of Telecommunications

- Overview of telecommunications principles
- Types of communication systems (wired vs. wireless)
- Key terminology and concepts

Introduction to Radio Communications

- Basics of radio wave propagation
- Frequency bands and their applications

- Components of a radio communication system

Radio Network Architecture

- Overview of radio network elements (Base Stations, Repeaters)
- Understanding radio access technologies (GSM, CDMA, LTE, etc.)
- Introduction to network topologies

Basic Radio Measurements

- Understanding key performance indicators (KPIs)
- Introduction to tools for measuring radio signals (spectrum analyzers, power meters)
- Basic troubleshooting techniques

Intermediate Telecom Radio Networks

Advanced Radio Propagation

- Factors affecting radio wave propagation (terrain, buildings)
- Introduction to propagation models
- Real-world applications of propagation analysis

Network Planning and Design

- Site survey methodologies
- RF planning tools and software
- Capacity planning and traffic modeling

Radio Network Optimization

- Techniques for optimizing radio networks
- KPI monitoring and analysis
- Hands-on optimization exercises

Security and Regulatory Considerations

- Overview of telecommunications regulations
- Security challenges in radio networks
- Best practices for compliance and security management

Advanced Telecom Radio Networks

Advanced Radio Technologies

- Deep dive into 5G technologies and beyond
- Understanding MIMO and beamforming
- Emerging technologies (e.g., IoT, NB-IoT)

Network Management and Automation

- Introduction to network management systems (NMS)
- Automation in radio network management
- Use of AI and machine learning in network optimization

Case Studies and Real-World Applications

- Analysis of successful radio network implementations

- Challenges faced and solutions applied
- Group discussions on future trends

Capstone Project

- Hands-on project to design, simulate, and optimize a radio network
- Presentation of findings and solutions
- Peer reviews and feedback sessions

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Registration Form

Telecom Radio Network (RN) L1 to L3

Preferred dates: ..... Venue or online: .....

Duration: 5 days Language: .....

Please complete and email this form to us, or register online. We confirm your place and send the invoice within one working day.

Delegate information

Full name (Mr / Ms / Dr / Eng): .....

Position: ..... Telephone / mobile: .....

Official email: ..... Personal email: .....

Company information

Company name: .....

Address: .....

City / country: ..... VAT / tax number: .....

Person responsible for training & development

Full name (Mr / Ms / Dr / Eng): .....

Position: ..... Telephone / mobile: .....

Email: .....

Payment

☐ Please invoice me ☐ Please invoice my company

Signature: ..... Date: .....

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Email this form
info@x8ti.com

Register online
Open the course page