XCELERATE TRAINING INSTITUTE

your learning & development partner

TELECOMMUNICATION

LTE-Advanced Technologies

DURATION	LANGUAGE	FORMAT
5 days	English	Classroom / Online

Upcoming dates

Dates	Venue	Format	Fee
4 – 8 Jan 2027	Live online	Online (live)	€1,200
8 – 12 Feb 2027	Berlin	Classroom	€4,800
12 – 16 Jul 2027	Live online	Online (live)	€1,200

Register or ask a question

Online: staging.x8ti.com/course/lte-advanced-technologies/

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LTE-Advanced Technologies

Introduction

LTE-Advanced (LTE-A) is an upgraded version of LTE that offers significantly faster data speeds. While LTE can reach up to 300 Mbps, LTE-A can achieve speeds of up to 1 Gbps. This improvement is made possible through MIMO technology, which utilizes multiple antennas for data transmission. However, this technology is limited to devices with multiple antennas. This course will cover the basics of LTE-A, including its different releases, carrier aggregation, MIMO enhancements, and practical applications.

Learning Objectives

This LTE-A training program aims to equip professionals with:

- A solid understanding of LTE-A fundamentals.
- The skills to implement and manage LTE-A technology in their organization.
- The ability to train others on LTE-A concepts.
- The knowledge to position their organization as a leader in the LTE-A market.
- The foresight to anticipate and address challenges related to LTE-A technology.

Training Methodology

This course by Xcelerate Training Institute combines lectures, group discussions, and practical exercises to provide a comprehensive learning experience. The training emphasizes hands-on learning and application of knowledge.

Benefits for Your Organisation

By enrolling employees in this LTE-A course, organizations can:

- Develop a skilled workforce to manage LTE-A technology.
- Improve overall efficiency through training.
- Enhance organizational growth and competitiveness in the LTE-A market.
- Leverage advanced LTE-A techniques to improve operations.
- Increase customer satisfaction.

Benefits for You

Participants in this LTE-A course will:

- Gain in-depth knowledge of LTE-A technology.
- Develop expertise in advanced LTE-A concepts.
- Acquire the skills to successfully implement and manage LTE-A.
- Improve problem-solving and decision-making abilities.
- Advance their careers through increased knowledge and skills.
- Contribute to the organization's competitive advantage.

Who Should Attend

This course is suitable for:

- Senior management involved in technology decisions.
- Technical leaders responsible for strategic planning.
- Technology and finance teams involved in LTE-A implementation.
- Managers looking to improve departmental efficiency.
- End-users of LTE-A technology.
- Engineers and professionals interested in LTE-A.

Course Outline

Introduction to LTE-Advanced

Overview of LTE and LTE-Advanced

- Evolution from LTE to LTE-Advanced
- Key features and enhancements in LTE-Advanced
- Comparison with LTE and other wireless technologies

LTE-Advanced Architecture

- Overview of the LTE-Advanced architecture
- Key components: eNodeB, EPC enhancements, and small cells
- Introduction to carrier aggregation

Advanced Radio Technologies

Carrier Aggregation

- Concepts of carrier aggregation and its benefits
- Types of carrier aggregation (intra-band, inter-band)
- Implementation challenges and solutions

Enhanced MIMO Techniques

- Overview of Multiple Input Multiple Output (MIMO) technology
- Types of MIMO configurations (e.g., 2x2, 4x4)
- Impact of MIMO on network performance

Quality of Service and Network Management

QoS in LTE-Advanced

- Understanding Quality of Service parameters
- QoS classes and their significance
- Mechanisms for QoS enforcement in LTE-Advanced

Self-Organizing Networks (SON)

- Introduction to SON and its objectives
- Key features of SON: automated optimization and self-healing
- Case studies of SON implementations in LTE-Advanced networks

Advanced Features and Applications

HetNets (Heterogeneous Networks)

- Understanding HetNets and their role in LTE-Advanced
- Types of small cells and their deployment scenarios
- Interference management in HetNets

Coordinated Multipoint (CoMP)

- Overview of CoMP and its benefits
- Types of CoMP techniques: joint transmission and coordinated scheduling
- Implementation challenges and solutions

Future Trends and Applications

- LTE-Advanced Pro and Beyond
- Introduction to LTE-Advanced Pro
- Key features and enhancements over LTE-Advanced
- Transition to 5G: implications and challenges

Real-World Applications and Case Studies

- Review of successful LTE-Advanced deployments
- Lessons learned and best practices
- Discussion on future trends in mobile networks

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Registration Form

LTE-Advanced Technologies

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

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Register online
Open the course page