

# LTE Basic Signalling Procedures

COURSE OUTLINE



## COURSE DETAILS

**Training Objective:** By the end of the course, the participants will understand the basic signaling procedures in LTE.

**Duration of Training: 1 Days**

**Max Number of Participants: 15**

**Prerequisite: General knowledge of mobile communication networks.**

## Module List Detailed

### Module 1: LTE Overview

Topics discussed in this module are listed below:

- LTE MOTIVATION
- LTE REQUIREMENTS
- LTE KEY FEATURES
- LTE ADVANCED

### Module 2: LTE Architecture

Topics discussed in this module are listed below:

- SYSTEM ARCHITECTURE EVOLUTION (SAE)
- NETWORK ELEMENTS
- BASIC ARCHITECTURE INTERFACES AND PROTOCOLS
- ROAMING ARCHITECTURE INTERFACES AND PROTOCOLS
- LTE AND 2G/3G INTERWORKING ARCHITECTURE
- LTE AND NON-2G/3G INTERWORKING ARCHITECTURE

### Module 3: Signaling Procedures

Topics discussed in this module are listed below:

#### LTE/SAE Mobility Areas

- Tracking Area Overlapping
- Tracking Areas: MME Pooling

#### UE IDENTITIES

- IMSI
- Global Unique Temporary UE Identity (GUTI)
- S-TMSI

#### MOBILITY MANAGEMENT

- EPS Mobility Management (EMM) States
- EPS Connection Management (ECM) States
- EMM & ECM States Transitions

#### LTE/SAE BEARER

- EPS Bearer Architecture
- Bearer Establishment triggers
- Default Bearer
- Bearer QoS Awareness
- Bearer QoS Parameters
- Bearer Usage Example

#### LTE/SAE PROCEDURES

- Attach Procedure
- Detach Procedure
- S1 Release Procedure
- Service Request
- Tracking Area Update Procedure
- Dedicated Bearer Activation
- LTE Handover
- EPS Authentication and Key Agreement (AKA)