

4G - 5G

COURSE OUTLINE



Course Details

Name: 4G-5G

Target Audience

This course is designed for participants who have certain degree of experience in mobile communication networks. Participants that would benefit by attending this course are Technicians, Sales/Marketing people and Project/Programme managers who are new in their role.

Training Objective

- By the end of the course, the participants will understand the Traffic Evolution in Mobile Communications Networks, Mobile Networks Evolution, LTE Advance Pro and Introduction of 5G.

Duration of Training: 3 Days

Prerequisite: General knowledge of LTE mobile communication networks.

Module List Detailed

Module 1: Traffic Evolution in Mobile Communications Networks

Topics discussed in this module are listed below:

- New Applications
- Internet of Things
- Cloud computing
- Mobile Data Growth
- 5G Data drivers

Module 2: Mobile Networks Evolution

Topics discussed in this module are listed below:

- Mobile Networks Evolution: from 1G to 5G
- 1G and 2G Networks
- 3G Networks
- LTE Networks
- Voice in LTE Networks
- LTE Advanced: Rel. 10 to Rel. 12
- Recent LTE Networks Features: LTE-Advanced Pro
- 5G Use Cases
- ITU Requirements for 5G networks: IMT-2020
- 5G 3GPP Standards: Release 15

Module 3: LTE Advanced Pro: Rel. 13 and Beyond

Topics discussed in this module are listed below:

- Full Dimension MIMO
- Multi-User Superposition Transmission (MUST)
- Enhanced LAA for LTE (eLAA)
- D2D Enhancements
- Enhanced LTE-WLAN Aggregation (LWA)

- Active Antenna System (ASS) Enhancements
- Other LTE Advanced Pro Features

Module 4: Introducing 5G

Topics discussed in this module are listed below:

- 5G Technical Objectives
- 5G Concepts and Architecture
- 5G New Radio (NR)
- 3GPP Standardization: Release 15
- Cloud-RAN (C-RAN)
- mmWave Spectrum for 5G