

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