LTE is 3GPP’s Long Term Evolution (LTE) plan for current UMTS/HSPA based 3GPP networks. LTE promises to dramatically increase data rates with flexibility in channel sizes. Additionally, it is based on completely All-IP flat network architecture to reduce latency, operation costs. This course discusses the LTE core network which is known as Evolved Packet Core (EPC) networks. The discussion includes protocols and interfaces between various components EPC as well as call flows for attach/bearer establishment procedures. The course covers network wide operations for mobility management for intra-LTE and LTE to 3GPP/3GPP2 networks. In particular, the course covers the following important topics (not exhaustive):

- Describe major features of next generation wireless networks
- Sketch LTE network architecture and its major components
- List and explain all the EPC components and Interfaces
- Describe the concept of EPS bearer and different types of EPS bearers
- Describe QoS and Security mechanisms in LTE-EPC networks
- Describe IP Address management options in LTE-EPC networks
- Describe GTP and PMIP based IP mobility procedures
- Describe interworking scenarios with 3GPP and non-3GPP networks
- Describe interworking scenarios with non-3GPP networks such as 1xEV-DO

At the end of the course, students will be able to define LTE network architecture, its radio interface and key functions.

Intended Audience

This is a technical course for LTE core networks. As such, it is suitable for engineering groups in manufacturers and operators. This course is suitable for the following audience:

This course is suitable for the following audience:

- R&D groups, network architects and test groups involved in design and development and deployment of LTE networks
- Product management teams tasked with defining product roadmap for LTE networks
- Technology Development Groups in operators interested in understanding the evolution path for their current networks

Duration:

2 Days (Instructor led)

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