



Great training. Instructor is very knowledgeable and patient. Very Happy with the structure and content of the course.



# 2G to 5G Mobile Networks (Intermediate Level)

## Course Description

This curriculum of our System Engineering range of courses is designed to provide a technical walkthrough of all of the contributing technologies that comprise today's mobile networks. The curriculum is modular, which means that the 13 days of training can be spread over a number of weeks. By the end of the training, attendees will have an up to date and detailed technical understanding of 2G, 3G, 4G, 5G, IMS and CloT technologies.

This course has no prerequisites.

**13** days  
(LiveOnsite,  
LiveOnline)

**78** hours  
learning  
(OnlineAnytime)

**78**

CPD Learning  
Credits



Level: 2  
(Intermediate)

**This course will contain the following sections:**

## **1. GSM and GPRS System Engineering (2 Days)**

**Topic areas covered include:**

- GSM and GPRS Architecture.
- GSM and GPRS Air Interface.
- GSM and GPRS Initial Procedures.
- GSM and GPRS Security.
- GSM Circuit Switched Operation.
- GPRS Packet Switched Operation.
- GSM and GPRS Mobility.

## **2. UMTS System Engineering (2 Days)**

**Topic areas covered include:**

- UMTS Architecture.
- UMTS Air Interface.
- UMTS Initial Procedures.
- UMTS Security.
- UMTS Circuit Switched Operation.
- UMTS Packet Switched Operation.
- UMTS Mobility.
- Interworking with GSM and GPRS.

## **3. LTE System Engineering (3 Days)**

**Topic areas covered include:**

- LTE Architecture.
- LTE E-UTRAN and E-UTRA.
- LTE Initial Procedures.
- LTE Security.
- Defining EPS Bearers.
- Utilizing EPS Bearers.
- LTE Mobility.
- Interworking with UMTS and GPRS.
- LTE and Voice Services.

## **4. VoLTE System Engineering (2 Days)**

**Topic areas covered include:**

- VoLTE End to End Architecture.
- VoLTE Foundation Technologies.
- VoLTE Initial Procedures.
- VoLTE Call Procedures.
- VoLTE to Legacy Voice Interworking.
- ICS and SRVCC.
- VoWi-Fi.

**13** days  
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LiveOnline)

**78** hours  
learning  
(OnlineAnytime)

**78**

CPD Learning  
Credits



LiveOnsite, LiveOnline,  
OnlineAnytime

## 5. CloT System Engineering (2 Days)

### Topic areas covered include:

- Cellular IoT Network Landscape.
- Cellular IoT Air Interface.
- Cellular IoT Initial Procedures.
- Cellular IoT Operation – IP Data Delivery.
- Cellular IoT Operation – Non IP Data Delivery.
- Cellular IoT Operation – Monitoring Devices.
- Cellular IoT Mobility.
- Cellular IoT – Interworking with 2G and 3G.

## 6. 5G System Engineering (2 Days)

### Topic areas covered include:

- 5G Concepts and Drivers.
- 5G System Architecture.
- 5G New Radio and NG-RAN.
- Non Standalone Operation.
- 5G Initial Procedures.
- 5G Security.
- Exchanging Data in 5G.
- 5G Mobility.
- Interworking with LTE and Wi-Fi.



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