MPIRICAL
Innovating Telecoms Training

> Amazing knowledge delivered in an enthusiastic and engaging way.

Exploring 5G

Course Description

In order for 5G to become the success it is anticipated to be, monetization of the technology is of paramount importance. This short course seeks to explore the commercial aspects of deploying 5G, from the initial design and roll-out of the network through to monetization as a result of initiatives such as Network Slicing, Multi Access Edge Computing (MEC) and Voice over New Radio (VoNR).

This course has no prerequisites.

1	6	
Day (LiveOnsite, LiveOnline)	**CPD Learning Credits**	**Level: 1 (Beginner)**

This course will contain the following sections:

1. 5G Commercial Considerations

Topic areas covered include:

- Driving Factors for 5G:
  - The Anatomy of a 2020 Mobile Network.
  - Why is 2G and 3G Still Operating?
- 5G Standardization:
  - From IMT Advanced to IMT 2020.
  - Performance Capabilities.
  - The Role of the 3GPP.
- 5G Use Cases:
  - 5G Small Cells.
  - 5G Wireless Backhaul.
  - 5G for Fixed Wireless Access.
  - Private 5G Networks.
  - 5G and Autonomous Vehicles.
- 5G and Artificial Intelligence:
  - What is Artificial Intelligence.
  - 5G Driving Artificial Intelligence.
  - Artificial Intelligence Driving 5G.

2. Understanding the 5G Network

Topic areas covered include:

- The 5G Network Architecture:
  - Non Standalone Operation.
  - Control and User Plane Separation.
  - 5G Network Architecture.
  - Virtualization in the RAN and Core.
  - 2020 Network Architecture.

Understanding the 5G Network (cont.)

- Transferring Data in 5G:
  - PDU Sessions.
  - Transferring Data via the UPF.
  - Transferring Data via the NEF (IoT Centric).
- Network Operation:
  - Finding the Network.
  - Network Registration.
  - Establishing a PDU Session.
  - Sending and Receiving Data over 5G.
- Mobility and Interworking:
  - Tracking Area Updates.
  - Handovers.
  - Interworking with 4G.
  - Interworking with Wi-Fi.
  - Roaming.

3. 5G Services and Technology Enablers

Topic areas covered include:

- Understanding Network Slicing:
  - What is Network Slicing?
  - Deploying a Network Slice.
  - Network Slice Use Cases.
  - Network Slicing and Roaming.
- The Role of Multi access Edge Computing:
  - What is MEC?
  - Benefits of Introducing MEC.
  - Deploying MEC.
  - MEC Use Cases.

1
Day
(LiveOnsite, LiveOnline)

6
CPD Learning Credits

LiveOnsite, LiveOnline

5G Services and Technology Enablers (cont.)

- Voice Services in 5G:
  - Delivering Voice.
  - VoLTE / VoNR Principles.
  - Deploying VoNR.
  - VoNR and Roaming.