

IMS architecture defined by the 3GPP/3GPP2 group, is designed to enable seamless deployment of applications across a core network based on the open standards of the Internet Protocol. This course provides a good understanding of IMS background, architecture, protocols, Nodes and services. A good knowledge of fixed and wireless networks would be beneficial for anyone attending this course.

## Who Should Attend

This is beginner level course and suitable for telecom professionals & students who have little or no understanding of IMS.

## Objective

After completing this course, the audience will be able to:

- Understand IMS architecture
- Define IMS interfaces
- Describe SIP Protocol
- Explain IMS signaling procedures and protocols

## Course Contents

### IMS Introduction

- What is IMS?
- What does IMS provide?
- IMS Benefits – For Carriers
- IMS Benefits – For Users
- High level requirements – IMS Applications

### SIP Overview

- Where we can use SIP ?
- SIP Architecture
- SIP Messages

### IMS Networks Architecture

- Reference Points
- 3GPP IMS Network Configuration
- Key IMS Concepts
- Call Session Control Function - P-CSCF, I-CSCF, S-CSCF
- Breakout Gateway Control Function (BGCF)
- Multimedia Resource Function (MRF)
- Home Subscriber Server (HSS)
- SGW/MGW
- Media Gateway Controller Function (MGCF)

### Interworking with CS Networks

- Interworking Reference Model
- Interworking between IM CN subsystem and CS network

### IMS Procedures & Signaling Scenarios

- Establishing IP-Connectivity Access Network (IP-CAN) bearer for IM CN Subsystem Related Signalling
- Proxy CSCF discovery
- Interrogating CSCF - Determine Serving CSCF
- Registration with S-CSCF

### Emergency service handling

- Reference Architecture
- Emergency CSCF
- Location Retrieval Function

### TISPAN IMS

- NGN Functional Architecture
- NGN IMS Overview