

Common Channel Signaling System No. 7 (i.e., SS7 or C7) is a global standard for telecommunications defined by the International Telecommunication Union (ITU) Telecommunication Standardization Sector (ITU-T). The standard defines the procedures and protocol by which network elements in the public switched telephone network (PSTN) exchange information over a digital signaling network to effect wireless (cellular) and wireline call setup, routing and control. This course provides a good understanding of SS7 layers, functions and deployment configurations.

## Who Should Attend

This is beginner level course and suitable for telecom professionals & students who have little or no understanding of SS7 protocols.

## Objective

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

- Understand SS7 Network Architecture
- Define Signaling Network Elements
- Describe SS7 Protocols & Stacks
- Explain SS7 signaling
- Describe SS7 usage in Mobile Networks

## Course Contents

### SS7 Overview

- What is SS7?
- SS7 History
- SS7 Objectives
- SS7 Network Elements
- SS7 Links
- OSI vs. SS7
- SS7 Protocol Layers
- SS7 Functional Architecture

- **SS7 Protocol Description**
  - MTP1
  - MTP2
  - MTP3
  - ISUP
  - TUP
  - SCCP
  - TCAP
- **SS7 in Telecom Networks**
  - In PSTN Network
  - SS7 in 2G/3G Networks
  - PSTN, PSTN-2G/3G Control Plane
  - 2G, 3G core network Control Plane
  - 2G/3G access network Control Plane
- **SS7 Signaling**
  - Normal Alignment
  - Signaling Link Activation
  - Signaling Link Handling
  - Basic Call Setup/Release
  - ISUP Maintenance
  - SCCP Signaling & Management
  - TCAP Dialog management