



# Course Profile

## Overview of Mobile Networking

**GEN3001**

**Duration:**

2 days

**Objectives:**

**T**o provide a technical overview of existing and proposed new Mobile Networks, including Wireless and their application.

**M**aking frequent reference to currently implemented mobile and wireless networks.

**I**dentify the relative benefits of each of the different types of system and also explores future trends.

**P**resent an overview of future trends and enhancements.

**D**escribe the key differences between technologies equipment.

**Who should attend:**

Managers and engineers with responsibility for the specification, implementation and management of mobile or wireless networks, or for anyone new to the mobile communications industry.

**Prerequisites:**

None.

**Follow-on courses:**

Any other course on a specific Mobile or Wireless technology



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#### Key contents:

First Generation Mobile	2nd Generation Mobile
3rd Generation Mobile	GSM
TDMA,	CDMA
Analog Systems	NMT450
NMT900	GPRS
GTP	UMTS
TCP/IP	IPv4
Packet Switched Networks	Circuit Switched Networks
Data Rates	Frame Relay
Quality of Service	TETRA
TMO	DMO
Satellite Systems	LEO
GEO	Inmarsat
MEO	Iridium
Intelsat	Cordless Telephony
DECT	CT1 & 2
WCDMA	Spread Spectrum
Frequency Licenses	Future enhancements
Wireless LANs	Wireless WANs
EDGE	HSCSD
Bluetooth	Standards Bodies
ITU	ETSI
ARIB	IMT-2000
WiFi	WiMAX



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### **Detailed contents:**

#### **Introduction to Mobile Communications**

Background of GSM Systems  
Evolution of mobile communications  
Radio Frequency spectrum problems  
Network growth problems

#### **Basic Radio Theory and Transmission principles**

Radio transmission techniques  
Difficulties in transmission  
Basic Radio systems  
Security and error correction methods  
Relationship between bandwidth and data rates

#### **Mobile Systems and Networks**

Explains the architecture, objectives, characteristics, features, services, Interfaces, advantages/disadvantages and operation of the following Mobile systems:

GSM  
GPRS  
Satellite - (LEO, MEO & Geostationary)  
Private Mobile Radio -(TETRA)  
Cordless Telephony - (CT1 & 2, DECT, Bluetooth)  
Wireless System (WiFi, WiMAX, WLANs)  
CDMA/UMTS and 3rd Generation Systems

#### **The Planned evolution path for Mobile Communications**

Technological issues of mobile communications  
Mobile communications market drivers.  
Harmonisation process for Mobile communications networks and standards.  
International Telecommunications standards bodies .



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To book this course, or to obtain more information, contact:

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