

GSM AND GPRS FUNDAMENTALS

“Understand Mobile Communication Networks and Data Services from Ground Up.”

Schedule

Venue (InHouse)	Fees
At Your Organization Premises	Ask For The Quotation

► **Available delivery methods:** In-House Training

Introduction

Global System for Mobile Communications (GSM) and General Packet Radio Service (GPRS) form the foundation of modern mobile voice and data services. This course provides participants with a comprehensive understanding of GSM network architecture, protocols, and GPRS data services.

Through practical examples, case studies, and interactive sessions, participants will gain the skills to design, implement, and troubleshoot mobile communication networks and understand the role of GPRS in enabling mobile data services.

Objectives

By the end of this course, participants will be able to:

- Understand the basic principles of GSM and GPRS networks.
- Explain GSM architecture, components, and signaling.
- Describe GPRS architecture, packet switching, and data flow.
- Configure and manage mobile network elements.
- Analyze GSM and GPRS performance and troubleshoot network issues.
- Understand the integration of GSM/GPRS with other telecommunication networks.

Why Attend

Mobile communication is central to today's connected world. This course equips telecom engineers, IT professionals, and network planners with the knowledge to design, manage, and optimize GSM and GPRS networks, ensuring reliable voice and data services.

Target Audience

This course is suitable for:

- Telecom engineers and mobile network professionals
- Radio network planners and operations staff
- IT professionals involved in mobile data services
- Students and professionals entering the mobile communication industry
- Network technicians and system integrators

Individual Benefits

- Gain deep insights into GSM and GPRS technologies.
- Enhance skills in network configuration, management, and troubleshooting.
- Improve understanding of mobile data transmission and services.
- Increase professional value and employability in telecom and networking roles.
- Develop confidence in working with GSM and GPRS infrastructures.

Organizational Benefits

- Optimize mobile network deployment and performance.
- Reduce service downtime and operational issues.
- Improve quality of service and customer satisfaction.
- Strengthen internal telecom expertise and workforce capability.
- Support strategic planning for mobile voice and data services.

Instructional Methodology

- Instructor-led interactive lectures and discussions
- Hands-on lab exercises and network simulations
- Case studies of GSM and GPRS deployments
- Group exercises for problem-solving and troubleshooting
- Continuous feedback and Q&A sessions

Course Outline

- Module 1: Introduction to Mobile Communication and GSM Fundamentals
- Module 2: GSM Network Architecture and Key Components
- Module 3: GSM Signaling and Channel Structure
- Module 4: Subscriber Identity and Authentication (SIM, IMSI, and Authentication Procedures)
- Module 5: Introduction to GPRS and Packet-Switched Networks
- Module 6: GPRS Architecture, Protocols, and Data Flow
- Module 7: Network Planning, Configuration, and Optimization
- Module 8: Troubleshooting GSM and GPRS Networks
- Module 9: Integration with 3G, 4G, and Future Networks
- Module 10: Capstone Exercise – Analyzing and Optimizing GSM/GPRS Network Performance

Certification

Upon successful completion, participants will receive a Certificate in GSM and GPRS Fundamentals, validating their knowledge and skills in mobile network architecture, data services, and performance optimization.

Why Choose MAWA Events

- **Global Expertise:** More than 17 years of experience in professional training and consulting.
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In-House / Customized Training

Interested in running this course for your team?

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