



PIONEER WIRELESS SERVICES PVT. LTD



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### Telecom Training Programme on GSM, WCDMA & 4G-LTE

This Comprehensive Training Programme is designed to give a through introduction to the NextGen Telecommunication Networks and Legacy Networks (GSM/WCDMA/LTE). Our Member and staff of Trainers are highly experienced and dedicated professionals with several years of proven experience in the Telecom industry. We strive to provide Innovative Powerful and strategic methodologies to enable Engineers to deliver cost effective Telecom solutions rapidly. The Emphasis is on understanding the various nodes that comprise the Network architecture of the above mentioned technologies and know the function of each node. this programme addresses the challenges faced in RF Testing, Evaluating the key Performance indicators (KPI) and optimizing the network to provide optimum coverage and capacity. The information gained can be applied to troubleshoot any issues affecting the KPI targets like Handover Failures, Dropped-calls & Lower Cell Throughout. This Workshop Combines insightful Lectures with practical lab exercise to reinforce key concepts. you will also learn advance cellular networks like LTE techniques that will increase your overall proficiency and enhance your understanding of modern day Telecommunication Networks.

### 100 % Placements Assistance

We are the only ones to provide practical exposure on industry standard testing tools and softwares.



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## Superior Training Superior Results

### We Make Wireless Better Telecom Training Programme



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Our technology Group Specializes in a Variety of Services like design, performance Planning and optimization, The members of our Team have considerable experience in the area of LTE, WIMAX, UMTS, EVDO, PCS, GSM, CDMA, TDMA, IDEN, in-building design, Data Networks, Switching, and expert zoning testimony,

Our Training programme helps students obtain hands-on experience which they can apply to their on going coursework. They would get the opportunity to work like in areal corporate environment and understand the technical aswell as professional needs of the industry

#### Technologies covered:

GSM, GPRS, EDGE (EGPRS)  
WCDMA: UMTS-FDD, UMTS-TDD,  
HSDPA, HSUPA and HSPA+,  
LTE/4G: A Comprehensive look at the Generation Mobile Network.

#### MODULE 1: GSM - BASIC TO ADVANCE

A Technology overview  
Network Architecture, Operation and Design  
GSM:Architecture, Operation and Security  
GSM: Optimization and advance Features  
GSM: Frequency Planning  
GSM: GPRS and EDGE: An Intensive Study  
Mobile Packet Backbone Network (MPBN)

#### Module 2: WCDMA - Umts FDD and UMTS TDD

3G System : WCDMA/UMTS and CDMA2000  
UMTS-FDD : Network Architecture, Operation and Design  
UMTS-TDD : Network Architecture Operation and Design  
Scrambling Code Planning and Allocation  
WCDMA-GSM Interperability Tuning

#### Module 3: High Speed Data Network

How High Speed Data Network Make Mobile Broadband  
A reality for the End User  
HSDPA : Network Architecture, Operation and Design  
HSDPA : Network Advance Tutorial  
HSUPA : Network Architecture, Operation and Design  
Optimizing HSPA (HSDPA and HSUPA) Networks

#### MODULE 4: Introduction to LTE

Moving forward Beyond HSDPA, HSUPA and HSPA-  
LTE Network Architecture  
E-UTRAN, EPC (Evolved Packet Core) and IMS  
LTE and voice (IMS, VOIP, CS-fallback)  
Volte (Voice over LTE)  
LTE Radio Network Design and Planning Concepts  
MIMO Configurations (2x2, 2x4, 4x4), SON-ANR  
LTE Radio Challenges  
LTE Advanced and Future Mobile Networks

#### RF Issues Troubleshooting (Reasons & Solutions):

Coverage Analysis  
Capacity Analysis  
Interference Analysis  
Frequency Planning and Methods on Mapinfo and MCOM  
Log Files Analysis  
Call Drop Analysis  
Handover Failures  
Layer 3 Message Analysis  
SD Blocking and Congestion Live KPI and Parameter-  
Reports from OSS  
TCH Drops and Failures Live KPI and Parameter Reports  
from OSS