



TMG Consultancy Ltd

Creating Value from Expertise Around the World

Professional Training Consultancy

Course Catalogue

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Course Group A: Technology

Path to 4G

The course is structured to give an overview of 4G and the technical aspects required for its implementation. At completion, participants would have acquired:

- Broad understanding of 4G Technology and the evolution to it
- Specific implementation of each aspect involved in the evolution.
- A detailed understanding of the different requirements and the underlying principles of LTE specific implementation.
- An appreciation of the issues in the final network deployment and rollout of 4G networks.

Analogue to Digital TV Switch Over

- Understanding of TV broadcasting as a one to many communication system
- Review of digital and analogue transmission technologies and advantages of digital transmissions
- Broad knowledge of first and second generation DTTV systems
- Awareness of TV broadcast regulatory issues
- Appreciation of the need for a national digital broadcast plan that incorporates analogue to digital TV switch over (ASO)
- Awareness of the need for detailed planning of ASO
- Understanding of need and possible means to facilitate ASO
- Assessment of example ASO processes through case studies

Broadband Access Technology

On completion of this course the delegates will have a good understanding of:

- Wide range of current and emerging broadband access technologies
- Engineering principals and practical network design aspects
- Importance of regulation and thought process behind making a policy framework
- Commercial implications that leads to viable investments
- Choosing a suitable broadband strategy to meet the local requirements
- Deploying a cost effective broadband access technology
- Service aspects and improving customer satisfaction
- The economics and engineering of the radio spectrum

Cisco (LAN, WAN) Training Modules

On completing this course the delegates should be able to:

- Identify all networking related hardware devices
- Install and configure routers and networks on CISCO devices.
- Describe the TCP/IP models and data flow within the network setup.
- Describe Wireless networking concepts and terminology
- Identify security threats and how to mitigate them, ACL concepts
- Understand Networking protocols such as Ethernet, Spanning Tree Protocol, etc
- Set up a WAN, configure, implement it and secure connections.

Introduction to BSS- GSM architecture

- On completion of this course the delegates will:
- Understand basic concepts related to GSM networks
- Understand GSM network architecture and its components
- Appreciate the history of wireless telecommunications focused on the evolution of GSM
- Gain knowledge of GSM mobility management concepts
- Understand GSM radio resource management concepts
- Aware of different types of calls and service aspects

- Introduce GSM standards and related organizations
- Understand migration to GPRS, EDGE and Nokia 3G Technologies

Enterprise Security Management

- To educate participants to be aware of the various industrial security standards and compliance requirements
- Learn how to produce Enterprise security policies, guidelines and procedures
- Participants to be aware of internal and external threats and set up security response teams
- How to provide access control using devices and users
- Learn about Data Loss and data protection policies
- To educate participants about disaster recovery and business continuity

Fibre Optic in Access Networks

The course is structured to give an overview of optical networking and access technologies, the principles involved and service provisioning such as fibre LANs etc.

- At completion, participants would have acquired:
- Broad understanding of optical data transmission principles
- Broad understanding of optical networking elements and issues
- A detailed understanding of underlying principles of optical access technologies.

IP Network Design & Applications

The course is structured to provide participants with an overview of the IP protocol suite, its use in the design of IP networks, applications and implications for management of IP-based networks. On completion, participants would have acquired the following:

- Understanding of IP Protocol suite including IPv4 and IPv6
- Understanding of IP Services
- Understanding of IP network design concepts and IP Security
- Understanding of IP Applications in modern technologies

Quality of Service Monitoring

- Introduction & QoS Fundamental
- Blocking of Telecom Traffic
- Understand of QoS for Fixed Network, GSM and 3G Network
- Network Quality Evaluation and Criteria
- Keys Performance Statistics Criteria
- Focus on Regulation Quality of Service, Standards setting process for setting 2G & 3G Benchmarking
- Function of the QoS within the Regulatory Authority
- Reporting Requirements for Operators

Information Technology Security

At the end of the course participants are suppose to have learnt:

- how to plan and design an IT Security Architecture
- how to design enterprise security procedures and best practice for the various aspects of information security
- how to harden operating systems to provide security
- layer two network security
- layer three network security
- network security devices
- network security protocols
- Remote access using SSL and IPsec VPNs
- IT Security Policing methods
- how to set up IT security response teams
- how to train all staff on a regular basis to be aware of the data protection policy
- various forms of disaster which can lead to information loss
- how to draw up a disaster recovery plan
- how to test a disaster recovery plan
- how to minimise the effect of disaster if it occurs

Wimax Planning and RF Engineering

On completion of the course, delegates would be able to:

- Understand the basic principles of multi-carrier technology (and OFDM in particular), and its use to improve spectrum efficiency of broadband wireless networks
- Have an understanding of radio propagation and antenna requirements for WiMAX
- Understand the key features of the WiMAX network architecture
- Identify the key factors and considerations in designing a WiMAX network (including spectrum allocation and usage)
- Identify the various stages and tasks required in planning a WiMAX network, including use of planning tools to automate the planning process
- Identify some of the common pitfalls encountered in WiMAX design and planning, and approaches to avoid them

VoIP and MPLS

After completing this course the delegates should be able to:

- Identify the components, processes, and features of traditional telephony networks that provide end-to-end call functionality
- Describe methods of call control used on voice and data networks
- List components or capabilities that are required to provide integrated voice and data services in campus LAN, enterprise, and service provider environments
- Choose a voice compression scheme that best suits your needs given the fundamentals of digital voice encoding
- Describe the basic function of MPLS
- Compare the efficiency of routed and MPLS switched options for QoS networks
- Build infrastructures using MPLS over different physical infrastructures
- Provide reliability by deploying the re-routing options in the event of failures
- A detailed understanding of the different optical access paradigms and technologies
- An appreciation of the issues to be considered in choosing particular access technologies

Network Interconnectivity

- Provide a broad understanding of the Data communications and networking concepts
- Understand the drivers and ways of interconnecting and segmenting networks
- An understanding of the different switching techniques and VLAN applications
- Understanding of the TCP/IP protocol Suite and its Internetworking capabilities
- Understand how to design and manage internetwork connections in real life applications

Traffic Accounting and Revenue Assurance

- Participants are expected to be telecommunications practitioners and senior telecommunications operations personnel. The course is structured to give the participant knowledge to effectively deal with and manage service quality and telecom revenue.
- At completion, participants would have acquired:
- A detail understanding of telecom traffic generation
- A detail understanding of telecom traffic sources and flow within the network.
- A broad understanding of telecom traffic accounting principles.
- A broad understanding of telecom revenue assurance issues
- The characteristics of a traffic accounting and revenue assurance tools

VoIP

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- Describe methods of call control used on voice and data networks
- List components or capabilities that are required to provide integrated voice and data services in campus LAN, enterprise, and service provider environments
- Choose a voice compression scheme that best suits your needs given the fundamentals of digital voice encoding
- Describe the basic function of MPLS
- Compare the efficiency of routed and MPLS switched options for QoS networks
- Introduce ASTERIST
- Overview the building and operation of an ASTERIST installation
- Overview of VoIP applications generation on ASTERIST

Course Group B: Management & Planning

Diploma in Telecommunications Management Studies

This course is designed to meet these needs: seamlessly moving from technology elements to regulatory, to business to network and people operations, to financial management. This is all brought together in group projects in the last week to consolidate students' knowledge. Learning Outcomes:

- Provides a very good understanding of fixed and wireless telecommunications networks principles
- Provides a good understanding of fixed and wireless telecommunications networks in operation today
- Provides a good understanding of policy, regulatory and telecommunications markets
- Provides a good understanding of how telecommunications businesses are run from strategy to planning to products, marketing, etc
- Provides a good understanding of how telecommunications networks are run and managed including people management and customer relationship management
- Provides a good understanding of financial management of telecommunication networks

Adaptive Dispute Resolution

The course is structured to give an overview of ADR and its various techniques, the principles involved and how to use the approach in preventing or resolving disputes. Participants will be presented an interest-based conflict resolution process that empowers them to make decisions and work out their own solutions. Practitioners and senior operations personnel will utilize ADR skills to work collaboratively to reach mutually satisfactory solutions. Using these skills, participants will define their disputes and reach effective resolution.

Effective Change Management

At the end of the course the delegates will be able to:

- Identify Misconceptions about Change.
- Understand the Benefits and Importance of Change.
- Learn the Traits of a Successful Change Leader.
- Identify the Different Steps of a Change Process.
- Choose Actions that Avoid Risk.
- Set Goals, Motivate Employees and Delegate.
- Overcome Obstacles to Change.
- To Communicate Change Effectively.
- Cope Manage Uncertainty.
- Develop Strategies to move forward after the Change.

Finance for Non-Financial Managers

Participants are expected to be managers with little or no formal training in finance or other professionals wishing to develop their knowledge of finance to complement existing technical or other skills. On completing the course, they should be able to:

- Analyse and interpret key financial statements.
- Understand the structure of income statement, balance sheet, and cash flow statement and their importance.
- Assess the financial health of an organisation.
- Apply and evaluate decision-making tools for cost management, operational and strategic planning and control: absorption costing, relevant costing, and activity-based costing.
- Prepare and manage financial budgets.

Strategic Human Resource Management

At the end of the course the delegates will:

- Be up-to-date with current thinking in the strategic approach to Human Resource Management.
- Have a framework for analysing and developing a strategic human resource management framework.
- Be able to develop action plans to transfer programme learning.
- Recognise the implementation challenges in human resource management.
- Identify and implement human resource strategies, policies and practices that match an organisation's strategic objectives.
- Be able to link SHRM with strategic planning.

ICT Tools for Management and Planning

The main objective of this course is provide an alternative approach to management – one which is much more scientific, ensures process adherence with inherent quality controls, and readily provides managers with the information that they need to manage successfully. Specifically, it will provide:

- Examples of failed projects with the reasons for failure;
- Some hands on examples on how to plan
- Process modelling workflow approaches
- Interpreting automated metrics and their impact on management
- A case study showing all of the above

Strategic Marketing and Sales

On completion of the course, delegates would be able to:

- Understand and implement the basic principles of marketing, i.e. the marketing concept.
- Perform basic marketing environmental scanning.
- Understand selling behaviour and how to use this to build partnering relationships with clients.
- Communicate with clients and use active listening techniques to build rapport and to instil confidence in them.
- Structure any sales contact so as to maintain control and to close the deal.
- Use the right selling techniques to present one's product in an inciting manner.
- Motivate and retain customers with a view to creating a lasting relationship.

Marketing and Pricing of NGNs

- Understanding an overview of essential marketing and pricing concepts and frameworks applied to communication services
- An in-depth understanding and account of emerging and dynamic marketing, costing and pricing concepts that are increasingly being adopted in NGN environments.
- Broad understanding of marketing and its application to communication services
- Broad understanding of pricing and its application to communication services.
- Broad understanding of NGN- a technical overview (*technical depth would depend on the background of participants*)

- NGN business models with a clear focus on marketing
- Detailed understanding of dynamic pricing schemes in NGNs including costing and pricing strategies, objectives, methodologies, and legal and regulatory perspectives.

Project Management Tools for Project Managers

- Definitions of a project
- What tools for your project management
- Work breakdown & job package creation
- Use of controls such as various reports
- Use of budgeted timeline planner such as Gantt Charts
- Examples of tools, such as the UK OGC-PRINCE2 method
- Accessing support in managing your project
- Do's and don'ts for project managers

Talent & Knowledge Management and Change in Dynamic Environment.

On completion of the course delegates would be able to:

- Understand the changing context and business case for talent management
- Develop a talent management strategy for their respective organisations
- Build a high performance workplace
- Encourage a learning organisation
- Appreciate the importance of knowledge-based assets
- Transfer tacit knowledge
- Successfully implement change
- Know how to map the talent needs of the organisation against potential employees
- Make the case for talent management and understand the importance of incorporating talent management into the business strategy.
- Select from a range of different approaches which work in attracting, developing and retaining talent
- Create a talent management plan.

Project Management

At end of the course, participants would have:

- Acquired a critical knowledge base on project management
- Gained tools selection ability
- Gained tool adaptation & application skills
- Gained generic budgeted timeline planner ability
- Gained project management skills in small medium-sized projects management

Course Group C: Regulation & Interconnection

Consumer Protection and Complaints Handling In the Communications Sector

- Understanding *why* consumer protection is paramount
- Understanding *what* methods to consumer protection
- Understanding *who* are typically involved in consumer protection
- Understanding *how* to do good consumer protection
- Understanding the policy, legal and regulatory measures on consumer protection in the telecoms sector
- Understanding how to measure and enforce consumer protection
- Understanding consumer awareness and consumer empowerment

Frequency Planning and Spectrum Management

On completion of this course the delegates will understand:

- Fundamentals of radio spectrum
- Identify technologies utilising frequency spectrum
- Spectrum management principles and methods
- Frequency planning as a key to effective spectrum regulation
- Frequency planning techniques and spectrum management tools
- The importance of spectrum monitoring
- Compliance with spectrum policy and regulation
- Frequency assignment
- Measurement of radio signal

Interconnect Agreement & Licensing

This course will provide participants with an in-depth knowledge of the essential principles, theories and frameworks that underpin licensing and interconnection within modern communication environments. In particular, the course would provide an understanding of the principles of interconnection (services, reference interconnection offers RIO, cost modelling, local loop unbundling, and types of interconnection agreement). A blended learning approach involving lectures, case studies and hands-on application of key concepts has been adopted for the course to enhance the learning experience and outcomes.

Licensing, Interconnection and Pricing Regulation

This course will provide participant(s) with an in-depth knowledge of the essential principles, theories and frameworks that underpin licensing, interconnection and price regulation within modern communication environments. A blended learning approach involving lectures, case studies and hands-on application of key concepts has been adopted for the course to enhance the learning experience and outcomes

Market Based Spectrum Pricing

- Understanding the need for spectrum management
- Spectrum management methods, e.g. spectrum trading, spectrum for unlicensed use
- Understanding Administered-Incentive Pricing
- Understanding spectrum auctions and spectrum liberalisation
- Understanding spectrum trading, leasing, band management and secondary spectrum markets
- Understanding spectrum allocation policies and tradeoffs to arrive at them
- Understanding spectrum metrics to help drive spectrum efficiency and utilization
- Understanding the complicated development of spectrum policy – praxis and practice

Mobile Number Portability

- Review of mobile and fixed network architecture and service provisioning
- Review of numbering plans and regulations that govern numbering
- Review sub-systems for routing and call forwarding in mobile networks
- Explore the social and business drivers for number portability
- Explore the technical choices available for implementing number portability
- Explore the impact of number portability on an operator's business
- Explain the role of the regulator as an enabler for number portability

Radio Frequency Spectrum Pricing

- Understanding the need for spectrum management
- Spectrum management methods, e.g. spectrum trading, Spectrum for unlicensed use
- Administered-Incentive Pricing
- Spectrum liberalisation
- Spectrum auctions types and praxis
- Band Management & the role of a national spectrum regulator
- The principles and practice of market-based spectrum pricing