

Telecoms & Tech Academy

TELECOMS & TECH TRAINING 2019

- 5G, Connected Innovation, Applications & Services
- 4G & LTE
- Network Technology
- Technologies for Supporting Systems
- Commercial Aspects of Telecoms
- Management, Innovation & Strategy
- Marketing, Sales & Customer Focus in Telecoms

Classroom - Distance Learning - Online

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LEARNING FOR TELECOMS & TECHNOLOGY

ABOUT THE TELECOMS & TECH ACADEMY

Telecoms & Tech Academy is a leading training partner to the telecoms, media and technology (TMT) industries, having trained more than 30,000 professionals and 500 businesses through 50 specialist trainers.

We were borne out of the telecoms industry and understand the challenges the sector has been facing with the emergence of digital transformation and the connected innovation ecosystem. Our training portfolio continues to evolve to help address new and emerging skills gaps faced by telecoms & tech businesses. To provide you with leading-edge knowledge, our learning is influenced by our partners including Ovum and Google.

Our diverse portfolio helps participants develop the key competencies required to tackle arising issues and emerging opportunities in the current ecosystem, maximising your organisations position in the market.

Research & Analysis from Ovum

We benefit from the unrivalled analysis of the market provided by the Ovum research team, this vital research is used to enhance and inform our training programmes and ensure that our delegates benefit from the latest thinking.

OUR PORTFOLIO

- 5G, Connected Innovation, Applications & Services
- 4G & LTE
- Network Technology
- Technologies for Supporting Systems
- Commercial Aspects of Telecoms
- Management, Innovation & Strategy
- Marketing, Sales & Customer Focus in Telecoms

DELIVERY METHODS

- Classroom
- Distance Learning
- Online Academy

I hope you find these programmes of interest, please contact us to discuss how we can help build the skills you and your organisation needs to succeed in the rapidly evolving communication market.

Rosie Bernard
Managing Director
Telecoms & Tech Academy

30,000+

Industry professionals
trained

500+

Organisations have
benefited

97%

Learning satisfaction

50+

Specialist technology
and business trainers

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IN-COMPANY TRAINING SOLUTIONS

WE PROVIDE THE SKILLS AND COMPETENCIES TO EDUCATE TEAMS AND ENHANCE PERFORMANCE IN YOUR COMPANY

We'll take time to understand your requirements and deliver specialist training, from the experts, at your location anywhere in the world.

TAILORED SOLUTIONS

Off-the-Shelf

We can deliver an in-house version of any of our classroom courses included in this brochure.

Tailored

We can tailor an existing classroom course to your organisation's special requirements.

Bespoke

Tell us the problem you need solving and we will create a bespoke programme just for your organisation.

DELIVERY

Face-to-Face

We hand pick a leading practitioner to create a technical or commercially focused course, delivered in-house.

Digital

Not able to take time out of the office? We can develop a specialised programme for your team to learn on-demand.

Blend of Digital & Face-to-Face

Perfect for training a group of mixed abilities – our blended learning means pre- and /or post-learning on-demand, with onsite delivery focusing on practical application and more time for questions.

TRAINERS

Our team of versatile expert trainers can deliver training at all levels and can make complex technology issues accessible to non-technical staff as well as deliver in-depth engineering training. Our business trainers are specialists in their field, enabling them to address the key issues affecting the telecoms and technology industries today.

Clients include

Deloitte.



Microsoft

Ofcom



T-Mobile



5G, CONNECTED INNOVATION, APPLICATIONS & SERVICES

“

Perfect, the learning materials are very useful

AP, ESU

“

Good experience, it was instructive

MA, CFAO Technologies

1. 5G Readiness Workshop

Classroom - 5 Days

This programme aims to provide participants with a solid foundation to meet challenges and develop opportunities that 5G, Connected Innovation, and Smart Technology bring to the organisation. Participants also learn how to develop ideas, evaluate best practice, and explore ways to maximise opportunities.

Modules

- 5G/CI Business Environment
- 5G Technologies & Financial
- Financial
- Positioning for the Digital Age
- Developing the Customer & VP
- A Shared View and Best Practice

2. 5G Technology

Classroom - 2 Days

This programme explores the concept of 5G technology, how it works, the capability requirements, the technologies that will deliver the core capabilities, and the impact on the customer proposition. We will also look holistically at the role of 5G in the technology roadmap.

Modules

- Ovum operator survey of 5G
- Defining 5G, market drivers and use cases
- 5G technologies and core network concepts
- 5G radio access networks and technologies

3. Cloud for Telecoms

Classroom - 2 Days

This programme provides a comprehensive overview of cloud services and technology and explains in detail what it means for both cloud services providers (including established telecoms operators) and customers.

We start with the concepts and features of cloud services before looking at the underlying technology and architecture that underpins the cloud, as well as the business drivers and issues facing businesses and consumers when migrating to the cloud.

Course Contents

- Introduction to the Cloud
- Service Models
- Migration to the Cloud
- The Role of the Telecoms Operator
- The Telecoms Cloud Marketplace

4. Internet of Things – Business & Technology

Classroom - 2 Days

This 2-day training programme will focus on current and future business activities and standards activity in the realm of radio access. There are already a number of competing technologies that may be suitable for the many and various IoT applications, however they will need to meet the low power/low cost/short and long range requirements of a typical IoT service. This training will provide an overview of the existing and proposed technologies, from WiFi-based radio access to 3GPP Release 13 proposals.

Course Contents

- Internet of Things Overview
- IOT Market Trends and Business Cases
- IOT Enabling Technologies
- IOT Standardisation
- Existing and Proposed Technologies
- Cellular Networks 2G/3G/4G
- IEEE—Proposed Technology
- Proprietary—Proposed Technology
- Spectrum for IOT
- IOT Security

5. NFV & SDN for Telecoms

Classroom - 2 Days

This programme focuses squarely on the technical aspects of this network transformation and how it can support wider transformation within the business. Specifically, we look at the underlying concepts facilitated through the use of SDNs, NFV, and Cloud techniques. Conceptual models, architectures, best practice, operation, and deployment issues are explored in detail.

Course Contents

- SDN and NFV Concepts
- SDN Architecture and Application
- NFV Architecture and Application
- Industry Activity
- Industry Trends and Analyst Predictions
- Costs and Benefits of SDN/NFV

5G, CONNECTED INNOVATION, APPLICATIONS & SERVICES (CONTINUED)

6. Smart Cities

Classroom - 2 Days

This workshop looks at the systems, frameworks, control mechanisms, and technologies behind Smart City initiatives, as well as the opportunities, ecosystems, and the global community behind much of the progress. Case studies are used extensively to illustrate and analyse the requirements, as well as the dangers (and associated safeguarding mechanisms). Standardisation, benchmarking and the role of the different players within the various ecosystems are explored, including the role and opportunities for leading and coordinating specific elements of the overall system.

Course Contents

- Defining the Smart City—as a living entity
- Problems to be solved & issues to be addressed
- Technology, Data & Infrastructure
- Strategy, Governance & Industry Support
- Safeguards, Risk & Mitigation

7. Diploma in Evolving Technologies

Distance Learning - 9 Months

This programme is designed to equip telecoms professionals with the knowledge and strategic skills required by organizations undergoing, or looking to undergo, evolution towards the new wave of emerging technologies including LTE, LTE-A and 5G.

Core Modules

- Communication and Connectivity: Supporting Fast-Changing Societies
- The Telecoms Business Environment
- Access Network Technologies
- Core Network Technologies

Specialist Modules (select 5)

- Mobile Broadband Technologies
- IP Networks and Systems
- Traffic Engineering, QoS and MPLS in IP Networks
- Connected TV and Multimedia
- Security and Fraud Prevention
- Radio Principles
- Radio Network Planning
- Maximising LTE Performance and Efficiency
- Technologies 2020
- Towards 5G - Markets and Technologies

8. 8 Steps to IoT – Your Roadmap to the Internet of Things

Online Academy - 5 Weeks

This course is aimed at providing a framework on how to develop a successful IoT roadmap in 8 steps. It includes the most essential use cases, a suitable IoT architecture, business logics, monetization models and ecosystem concepts.

Modules

- IoT applications & generic IoT use cases (Step 1)
- The IoT use case model (Step 2)
- The IoT Technology Stack (Step 3)
- Business Logics (Step 4)
- Connectivity – The entrance to the IoT (Step 5)
- Value capture models in the IoT (Step 6)
- IoT Maturity Model (Step 7)
- Your roadmap for the IoT (Step 8)

9. Blockchain for Managers

Online Academy - 5 Weeks

This workshop takes a high-level look at the concept of a blockchain, explores in detail how a blockchain works to provide the trust at the heart of a digital ledger in the case of a digital currency, considers the introduction of smart contracts as an innovation on the blockchain and explores a diverse set of real-world scenarios.

Modules

- Owning the Blockchain
- The Disruptive Potential of Decentralised Trust
- The Quest for Trust Minimisation
- Commercial Relevant Blockchain Solutions
- Your Blockchain Project
- Real World Examples

10. An introduction to 5G

Online Academy - 3 Weeks

This Introduction to 5G course will help you to understand and define 5G, identify market drivers as well as cover the main 5G technologies and network concepts.

Programme Content

- Defining 5G, Market Drivers & Use Cases
- 5G Technologies & Network Concepts
- 5G Radio Access Networks & Technologies

11. IoT Technology & Business

Online Academy - 10 Weeks

This programme focuses on current and future business activities and standards activity in the realm of radio access and will provide an overview of the existing and proposed technologies, from WiFi based radio access to 3GPP Release 13 proposals.

Modules

- IoT Overview
- IoT Standardisation
- IoT Enabling Technologies
- Existing & Proposed Technologies
- Spectrum for IoT
- IoT Technologies
- IoT Market Trends & Business Cases
- IoT Business
- IoT Strategy
- IoT Privacy & Security

12. Smart Cities 101

Online Academy - 5 Weeks

This programme looks at the systems, frameworks, control mechanisms, and technologies behind Smart City initiatives, as well as the opportunities, ecosystems, and the global community behind much of the progress.

Programme Content

- Defining the Smart City—as a living entity
- Problems to be solved & issues to be addressed
- Technology, Data & Infrastructure
- Strategy, Governance & Industry Support
- Safeguards, Risk & Mitigation

4G & LTE

1. LTE Technology (Online Academy)

Online Academy - 5 weeks

This Online Academy programme where you will be given an in-depth, helicopter-view of LTE. The capabilities and limitations of LTE are examined as well as the overall business implications of LTE deployment. The concepts of OFDMA, MIM and interference management are explained, as are spectrum usage and deployment.

Modules

- LTE Overview
- The Need for LTE & Market Dynamics
- LTE Radio Interface
- Service Architecture Evolution
- Service Provision in LTE
- 4G-LTE Advanced and Beyond
- Annex: LTE Deployment

2. LTE Air Interface (2 DAY)

Classroom - 2 days

This course provides a comprehensive technical view of the LTE (Long Term Evolution) radio interface and radio aspects of the E-UTRAN (Evolved UTRAN). As well as the radio technology employed within LTE, the programme explores the UE–E-UTRAN interface (Layers 1-3) in detail, including capabilities, architecture, channels, Quality of Service aspects, operation, and coexistence with (and evolution from) 3G/HSPA.

Course Contents

- OFDM concepts
- Radio technology used in LTE
- Radio architecture
- Layers 1, 2 and 3—functions and operation
- LTE channels
- Quality of service and application support
- Co-existence with 3G/HSPA

3. LTE in Public Safety Networks

Classroom - 2 days

Public Safety bodies around the world are looking to deploy networks using the LTE standard, to replace aging infrastructure based on TETRA, PMR, and P25. LTE has much to recommend it in this role, but “standard” LTE systems lack key functionality that is required to replace the legacy public safety networks. Despite those limitations, governments globally, are evaluating whether LTE can meet their public safety requirements. With world-wide interest, extended standardisation work has been undertaken to incorporate functionality that support requirements unique to public safety users. This course covers the features that make LTE suitable for public safety use, and the omissions which make it less than perfect, enabling delegates to intelligently enter the debate and identify the right technology for every situation.

Course Contents

- Long Term Evolution
- Spectrum Allocations
- Public Safety Networks
- Public Safety Applications & Use Cases
- LTE, IMS and Service Support
- Network Sharing
- LTE-Advanced Features for Public Safety
- Regional Deployment Examples

4. LTE Radio Planning & Optimisation (5-Day Bootcamp)

Classroom - 5 days

This certification programme covers the principles and execution of LTE radio planning and optimisation. It begins with a discussion of the LTE physical layer explaining the time and frequency domain structures and covering those aspects of the LTE radio interface that will have an impact on coverage and capacity. A detailed examination of LTE link budgets is provided, identifying and calculating the typical link budget reference points and discussing elements of the budgeting process that are unique to LTE. Following the calculation of link budget pathloss, the course turns to propagation models and cell radius prediction. Typical models are discussed and compared and full link budget and radius predictions are carried out.

To support the link budget and modelling techniques, as well as apply the learning in an industry-leading software package, Mentum Planet will be used to demonstrate and analyse the LTE radio planning process.

Course Contents

- LTE architecture review
- LTE radio interface
- Link budgets for LTE
- Coverage planning
- eNB configuration
- IDLE mode parameters
- CONNECTED mode parameters
- Capacity planning for LTE
- Coverage planning for LTE
- Coverage optimisation

4G & LTE (CONTINUED)

5. LTE Technology

Classroom - 2 days

This course is designed for the delegate who requires a more technical insight into the operation of LTE, both the radio interface and system architecture are covered in detail. The physical layer sections includes topics such as OFDMA, SC-FDMA and advanced antenna techniques including MIMO. The functions of the eNB, MME, sGW and the standard interfaces X2 and S1 are explained and the overall operation of the SAE is demonstrated with example procedures.

Course Contents

- The LTE market
- LTE protocol stack
- Understanding OFDMA/SC-FDMA
- LTE interworking and roaming
- Capacity gains with MIMO techniques
- Standard architecture and interfaces
- LTE session and mobility procedures

6. LTE/SAE Evolved Packet Core and VoLTE

Classroom - 3 days

A clear understanding of the end-to-end LTE (Long Term Evolution) system is provided by this technical programme. It includes an overall appreciation of system requirements (including support for key applications and Quality of Service implementation), followed by a detailed view of the architecture, functions (by node), protocols, and operation of the Evolved UTRAN (EUTRAN), and Evolved Packet Core (EPC). Signalling and control, intersystem operation, security, and implementation options are all explored to ensure a comprehensive and detailed end-to-end view is provided.

Course Contents

- Overall end-to-end requirements of LTE
- Application and QoS requirements
- Architecture and protocols
- E-UTRAN functions and operation
- EPS functions and operation
- Signalling and control
- Security
- Implementation options

7. Voice over LTE (VoLTE)

Classroom - 2 days

Voice and voice related services for next generation mobile broadband services such as LTE will be managed and delivered over IP based networks. This programme will cover all aspect of IMS and its capabilities in respect of delivering voice services via the LTE network.

Course Contents

- LTE and IMS, architecture and protocols
- VoLTE signalling
- VoLTE roaming
- VoLTE messaging
- IMS Centralised Services (ICS) and RCS
- VoLTE performance and capacity

8. 4G/LTE Radio Planning and Optimisation

Distance Learning - 3 months

This programme significantly improves your understanding of the issues and techniques used to effectively plan an efficient and advanced 4G cellular network. This assessed course incorporates exercises, self-test assessments, and hands-on planning simulations using an industry leading radio planning tool—Mentum Planet from InfoVista.

Modules

- The Radio Environment & LTE/4G LTE Radio Planning Techniques
- LTE Planning in a Multi-RAT Environment
- Small Cells, Hetnets & LTE Advanced

9. Evolving the Core Network—EPC, PCC, IMS & VoLTE

Distance Learning - 3 months

Designed for those looking to develop an in-depth working knowledge of the core network and its likely evolutionary path. It looks at the core network technologies and architectures currently being adopted and existing core network requirements and architectures before looking at a range of service delivery techniques. It examines how best practice techniques are developed through the Evolved Packet Core and a range of advanced systems such as PCC, IMS, & VoLTE.

Modules

- Core Network Technologies
- Delivering Advanced Services
- The LTE Core Network (Evolved Packet Core)

10. Diploma in LTE & 5G

Distance Learning - 9 months

This programme would suit anyone who requires a detailed understanding of the LTE, the challenges in its deployment and an insight into the current market position. The programme is designed to give you a detailed understanding of LTE, and through its' modular structure allows for a good degree of specialisation and allows you to tailor your programme to suit you and your organisation's needs.

Core Modules

- Modern Telecoms
- Enabling Technologies
- Delivering Advanced Services
- Telecoms Business Models

Specialist Modules (select 5)

- Access Network Technologies
- Core Network Technologies
- ICT and Advanced Digital Services
- Connected TV—Internet Protocol for Television Transmission
- Managing Services, PCC & Billing
- Marketing Next-Generation Services
- Operating Effectively in Telecoms
- Advanced Radio
- Advanced IP
- Security and Fraud Prevention

NETWORK TECHNOLOGY

“

The program was well structured and the instructional method was excellent...

DS, Cable & Wireless

“

It really has broadened my knowledge of current technologies used in the mobile telecom industry

IAS, M-TEL

1. GSM, GPRS & EDGE Explained

Classroom - 2 days

The course begins with an industry perspective, identifying the key trends in modern telecommunications and the changing demands of the customer. An overview of GSM technology is then provided onto which GPRS and EDGE concepts, architecture and operation are built.

Modules

- Industry Outlook
- GSM and Network Architecture
- GPRS Protocols
- GPRS Air Interface
- Internet Protocol and GPRS
- Edge and E-GPRS
- Evolution

2. HSPA+: A Technical Overview

Classroom - 2 days

The 3GPP study in Release 7 is introduced and various HSPA+ enhancements, such as MIMO, 64QAM, CPC, are described. The concepts of radio interface are explained and the modules delve into areas of MIMO and interference management, spectrum allocations, and HSPA+ protocol stack and procedures.

Modules

- Intro to HSPA+
- Architecture
- Downlink MAC Functions
- Channels
- Radio Resource Management
- UE Capability
- Future DL Enhancements
- Uplink Overview
- Uplink MAC Functions
- HSPA+ Downlink Channels

3. UMTS Infrastructure & Operation

Classroom - 4 days

The protocols are examined in-depth, with appropriate emphasis on the expanding role of IP and associated protocols in the modern mobile network. Signalling flows are used where necessary to illustrate the operation and procedures. Other topics include HSPA, the implementation of signalling and security.

Modules

- Evolution to 3G and UMTS services overview
- UMTS Architecture
- The Radio Interface
- The UMTS terrestrial radio access network (UTRAN)
- Core network architecture and protocols
- IP in the mobile network
- Security and AAA
- SS7 functions, architecture and the message transfer part
- Signalling and Procedures
- The evolving signalling network
- Overall UMTS procedures and techniques
- High speed packet access (HSPA)
- Evolving the UMTS network

4. W-CDMA Air Interface

Classroom - 3 days

This course establishes the need for a new generation of mobile network before explaining, in detail, how UMTS proposes to meet those requirements. The service aspects, architecture, protocols, and implementation strategies are all presented in a clear, concise format.

Modules

- The need for 3rd Generation Systems
- UMTS Services and Applications
- UMTS Architecture
- Core Network Architecture and Protocols
- W-CDMA Applied to UMTS
- The UMTS Air Interface Channels and Protocols
- The UMTS Terrestrial Radio Access Network (UTRAN)
- Procedures
- Radio Planning Issues
- Evolutionary Strategies

NETWORK TECHNOLOGY (CONTINUED)

5. Introduction to Modern Telecoms

Classroom - 3 days

This course provides an excellent grounding in Modern Telecommunications. Current and evolving services, applications, technologies and networks, within the fixed, mobile and data/internet environments are examined giving a comprehensive overview of the Telecommunications Industry.

Course Contents

- Introducing the basics
- Services and applications
- Transmission, switching, and signalling systems
- Mobile networks including GSM, GPRS and UMTS
- Modern fixed networks
- Data communications
- The internet
- Radio systems
- The evolving telecommunications network

6. Foundation in Telecoms

Distance Learning - 3 months

This introductory programme is ideal for those new to the industry needing a good grounding in the modern communications industry. The programme covers the evolving telecoms business environment, technology issues and the telecoms customer proposition. It will benefit those looking to start a career in the telecoms industry, or those looking to consolidate their existing knowledge.

Modules

- Telecoms Industry & Business Environment
- Telecoms Technologies
- Telecoms Customer Proposition (Services, Marketing, Branding)

7. Telecoms 101

Online Academy - 5 weeks

This programme provides an excellent grounding in Modern Telecommunications, with the basics presented in a clear and easy to understand format. This short training course is aimed at those who are new to telecoms or those non-technical specialists who need refresher training.

Programme Content

- Introducing the basics: Services, Applications & Transmission Systems
- Switching, Signalling & Supporting Systems
- Techniques used in Fixed Networks
- Techniques used in Mobile Networks
- Datacoms & Internet
- Industry Outlook

8. Radio Planning & Optimisation Engineers Boot Camp

Classroom - 5 days

This programme develops the knowledge and competencies required for the efficient planning and optimisation of modern cellular radio networks in both single and complex multi-RAT environments. It covers topics ranging from the major principles and techniques that underpin cellular radio planning through to the latest radio technologies and the techniques required for the efficient planning and optimisation of advanced radio networks based on advanced modulation schemes and changing customer requirements.

The programme is designed specifically for those working as radio planning engineers or technical managers and delivers the knowledge and competencies needed to plan radio networks as effectively as possible.

Course Contents

- Radio principles
- Spectrum usage, frequencies & planning implications
- Cellular planning techniques
- Coverage, capacity and quality for 2G, 3G and 4G networks
- Network planning and infrastructure sharing
- Femto-cells and WiFi offload
- Interference and mitigation
- Dimensioning the radio network for VoIP
- Optimisation
- Cost per megabyte

TECHNOLOGIES FOR SUPPORTING SYSTEMS

1. Effective Policy & Charging Control through Diameter Signalling

Classroom - 3 days

This workshop explores exactly that in addition to looking at the impact on the network and interaction with existing signalling systems. It highlights the standard 3GPP solutions, including the migration to the Evolved Packet Core (EPC), as well as the major options for deployment. Finally, the course covers the overall requirements for signalling in modern networks and PCC.

Modules

- Introduction to Policy and Charging Control
- PCC Architecture
- Diameter Protocol
- PCC and related procedures
- Charging Procedures
- Best Practice Policy Control

2. IN and CAMEL (with Prepaid)

Classroom - 2 days

This course explains the role that the IN (Intelligent Network) concept and CAMEL (Customised Applications for Mobile Networks Enhanced Logic) play in allowing effective control of services and features in modern telecommunication networks. Potential services and applications are discussed and used to illustrate the value that both IN and CAMEL can bring to both operators and users.

Course Contents

- Services in modern networks
- Call control and SS7
- Intelligent network architecture and protocols
- Basic GSM and UMTS operation (call control and service support)
- CAMEL—introducing IN into mobile networks
- CAMEL—the architecture and protocols
- The evolving mobile network

3. Next Generation and Converged Billing

Classroom - 2 days

The move to digital services and the adoption of more innovative and flexible business models and pricing schemes depend on advanced Business Support Systems in order to maximise opportunities. At the heart of the telco revolution is the billing system. This programme explores the requirements, techniques, architecture and operation of modern (and advanced) converged billing systems. Both real-time and non-real-time charging scenarios are considered. Participants will also explore how billing works with the associated systems, including Policy Control and Charging (PCC) to provide the flexibility and capability needed by the modern communications service provider.

Course Contents

- Converged billing requirements
- Advanced billing systems
- Real time and non-real-time billing scenarios
- Architectures and procedures
- Working with policy control and charging
- Revenue assurance and billing

4. OSS/BSS Systems & Platforms

Classroom - 1 day

Exploring OSS and BSS solutions used in modern telecommunications, this course provides an overview of current and emerging systems as well as the enabling technologies. Procedures and organisational requirements are examined in both OSS and BSS areas, with due regard to the supporting infrastructure and IT requirements. The architecture and software platforms currently installed within networks are discussed and analysed, and a comparison made.

Course Contents

- OSS/BSS overview and requirements
- Focus on OSS
- Platforms and supporting networks
- Processes and procedures
- TMF and eTOM
- Focus on BSS
- Architecture and framework
- Integrating OSS and BSS

5. SS7 in Modern Networks (inc Diameter and BICC)

Classroom - 2 days

This course explains SS7 and associated signaling systems in depth, as well as the role they play in modern telecommunication networks. It also looks in detail at how SS7 is implemented in an IP environment using the SIGTRAN standards.

Course Contents

- Signalling Requirements and SS7
- SS7 Functions, Architecture and the Message Transfer Part
- Call Control and the ISDN User Part
- Non Circuit-Related Signalling—SCCP & TCAP
- SS7 in Use—GSM, MAP, INAP & CAP
- The Evolving Network—SS7 over IP
- SIGTRAN Network—Operation and Design
- BICC
- Diameter Protocol

COMMERCIAL ASPECTS OF TELECOMS

1. An introduction to Big Data

Online Academy - 5 Weeks

This workshop looks at the fundamentals of Big Data, taking a step-back and building a foundation which can be leveraged across the business.

Programme Content

- What is Big Data & interesting versus actionable data
- Big Data & Business Intelligence
- Big Data Landscape
- Identification and moving between the phases of analytics in the context of Big Data
- Barriers and Challenges
- Framework

2. Big Data for Telecoms

Classroom - 2 Days

This two-day workshop is aimed to empower the participants to understand how to fish out insights from an ocean of data. The workshop will cover the fundamentals of Big Data and its intersection with the development and execution of strategy: What is data? What is Big Data? The difference between Big Data and Business Intelligence; identification, and the difference between interesting and actionable data; the Big Data technological landscape; the different phases of analytics used in Big Data analytics and how to move seamlessly between the phases; barriers and challenges in value extraction from Big Data; framework for the building of the business case for Big Data; and the application of data thinking to a case scenario.

The course is premised on the application of Big Data and analytics concepts as it relates directly to business. Ultimately, participants will have a deeper appreciation of data, how this can be leveraged for innovation, programme design, problem-

Course Contents

- What is Data & Interesting vs. Actionable Data
- Big Data & Business Intelligence
- Big Data Landscape
- Identification & Moving Between the Phases of Analytics in the Context of Big Data
- Diagnostics, Barriers & Challenges
- Framework to Build the Business Case
- Leveraging Big Data for Strategy

3. Advanced Big Data for Telecoms

Classroom - 2 Days

The three-day advanced workshop is aimed at providing an understanding of the concept of big data and its potential power in combination with the “right” analytic methods and tools; how organizations need to collect and organize the big data; the importance of creating an agile organizational environment to allow for maximum value extraction from predictive analytics; how to use evidence in the form of structured and unstructured data to change industry landscapes; how to meet consumer needs on a 1-to-1 basis (as opposed to in a group); and how to adopt a philosophy and practice of big data analytics in strategy development throughout the organization.

Course Contents

- Leveraging Big Data for strategy
- What is Big Data? An analysis of interesting versus actionable data
- Big Data and Business Intelligence
- Big Data Landscape
- Identification and moving between the phases of analytics in the context of Big Data
- Diagnostic and barriers and challenges
- Framework to build the Business Case (Use Case)
- Practical Business Simulation

4. Cost Optimisation for the Telecoms Professionals

Classroom - 2 Days

This course covers cost management strategies, frameworks for cost analysis, and practical techniques for implementing cost reduction. Compare your organisation against the top 40 operators to understand the options for improving financial performance moving forward.

Modules

- The Cost Management Process
- Strategic Cost Management
- Cost Removal
- Commercial, Technical & Financial Appraisals
- Cost Management
- Cost Optimisation
- Budgeting Challenges
- Zero-Based Budgeting
- Awareness of Overheads
- Overheads & Product Costing
- The Human Factor
- Cost Reduction Culture
- Cost Control Reports
- Cost Action Plan



COMMERCIAL ASPECTS OF TELECOMS (CONTINUED)

5. Finance for Telecoms Professionals

Classroom - 2 Days

Straight forward and no-nonsense, participants will learn the practical financial skills that will help them make better management decisions and enable them to get straight to the heart of financial issues, demystify financial information and give them complete confidence and control when making financial decisions including the importance of EBITDA, cash and profit, and the links to the businesses strategies and tactics and understand the most relevant financial ratios in the telecoms industry and benchmark yourself against the top 40 operators to generate options for improving financial performance. You'll learn to champion the cause of cost cutting and improving profits and how to establish clear goals, quickly and consistently implement and effectively measure and understand your financial results and those of your competitors.

Course Contents

- Critically examine and interpret key financial information including the importance of measuring the impact of marketing activities and establishing the ROI of business decisions
- Confidently assess ROI for potential capital and operational expenditures and understand the differences between cash flow, revenue and capital budgets to optimise your use of working capital
- Be able to appreciate cash-flow, sunken costs and profit and how they are managed and be able to develop forecasts and monitor and control costs and improve revenue and ROI
- Prepare break-even analyses for business plans, new projects and boardroom presentations and prepare, perform and present confidently in a financial environment

6. Regulation for the Digital Age

Classroom - 4 Days

This intensive four-day course is intended for those working in regulation, both those who are highly specialised or relatively new to it; additionally, those working in the telecommunications industry that need to understand the importance and power of regulation in the industry and to respond flexibly to the challenges that it presents. The course concentrates the economics of regulation and the challenges posed by next generation technologies. It examines the political, economic and technical principles that lie behind regulation and draws upon the varying needs and experiences of actual regulatory environments around the world. Regulatory strategy and its commercial impact will be considered by examining the development of example national regulatory organisations, along with a regulatory road map.

Course Contents

- Why regulate?
- Regulatory institutions and the process of regulation
- Managing competition
- Abuse of a dominant position
- The regulatory function
- Compliance: Cost or opportunity
- Developing a regulatory strategy
- Price regulation
- Cost models
- Regulation of next generation networks
- Regulating radio spectrum

7. Finance in Telecoms

Distance Learning - 3 Months

This programme looks at the financial aspects of running a successful telecoms business. The main financial concepts and accounting documents are explained with examples. Effective financial control is explored, where budgeting, financial processes, and forecasting techniques are presented and evaluated. Financial data and reports are used to analyse and make sense of the business, using appropriate financial KPIs to evaluate performance and to underpin key strategic decisions.

Modules

- Finance for Telecoms Professionals
- Budgeting & Forecasting in Telecoms
- KPIs & Financial Analysis

8. Project Management for Telecoms

Online Academy - 5 Weeks

This workshop reveals areas of growth within your project by the means of efficiency, structures and improved quality. The workshop focuses on providing an understanding of key technical and management challenges experienced by the Telecoms Project Manager during the projects stages.

Modules

- Project Management Objectives
- The Role of the Project Manager
- Develop the Project Brief
- Project Management Planning
- Monitoring and Controlling

MANAGEMENT, INNOVATION & STRATEGY

1. Building a Roadmap for Digital Transformation

Classroom - 4 days

This Executive Workshop develops best practice ideas on the transformed telco - and in particular examines what needs to be done in terms of the business models, the customer proposition, partnerships, technology and business enablers, people, and culture in order to maximise future performance and become an effective Communications Service Provider.

Course Contents

- Where are we now?
- Digital leadership & redefining the customer
- Maximising success—innovation, transformation & enablement
- Best practice digital leadership

2. Developing Customer Centricity in the Transforming Telco

Classroom - 5 days

This five-day interactive programme is designed for managers who need to develop a thorough understanding of how to address changing customer requirements profitably in the context of communications industry shifts. It uses case studies and best practice examples throughout and provides tools to help organisations and their partners to assess where, when and how to become more customer-centric, using customer focus as the basis for improving overall organisational efficiency and effectiveness.

Course Contents

- Advanced Marketing
- Changing Customer Requirements
- CRM & CEM
- Branding & Marketing Communications
- Customer Focus & ROMI

3. Driving Commercial Performance in Telecoms & Tech

Classroom - 5 days

The fully participative programme contains highly interactive facilitation, discussions, case study methodology. Organizational alignment, accountability, and a results orientation are stressed in each session and all the sessions are hands-on practical sessions designed to create not theory, but practical, business building plans and skills.

Modules

- Building Strategic Aptitude
- ICT And Digital Media Business Environment And Strategic Outlook
- Lean B2B: Identifying Opportunities And Successful Decision Making
- In Depth Financial And Critical Analysis
- Navigating The Numbers: Aligning Kpi's To Strategy
- Cross-Functional Alignment & Agile Innovation Management
- Building Collaboration, Partnerships & Communication
- External Acumen And Shareholder Management

4. Telecoms Mini MBA

Classroom - 5 days

This programme is highly participative, focusing on real business, technology and industry issues. It is designed to give participants a critical understanding of the key competency areas required for organisational and individual success within the modern telecommunications industry. It enables participants to make more informed and commercially viable strategic decisions, or to contribute more effectively to value creation within their own organisation. The programme is made up of modules covering five main competency areas, as well as a comprehensive business simulation that runs throughout the programme.

Course Contents

- Strategy and business environment
- Technology
- Finance
- Leadership and people management
- Marketing and customer focus

5. Diploma in Telecoms Business

Distance Learning - 9 months

Designed for those who need a thorough grounding in telecoms business as part of their job function, or those who have specialist knowledge in a specific area of telecommunications (business or technology), and wish to contribute and communicate more fully and effectively with the wider business—giving them the confidence to better innovate and build value for the organisation.

Core Modules

- Telecoms Business Environment
- Finance for Telecoms Professionals
- Marketing Communications Services
- Operating Effectively in Telecoms

Specialist Modules (select 5)

- Telecoms Technologies
- Project Management in Telecoms
- Customer Engagement & Branding in Telecoms
- Future Business Models for ICT Players
- Customer Relationship Management in Telecoms
- Sales and Value Chain Management
- Budgeting and Forecasting in Telecoms
- Access Network Technologies
- Digital Television and IPTV
- OSS, BSS and Billing

6. Telecoms Masterclass

Online Academy - 5 weeks

This masterclass is a mirror of our face-to-face Telecoms Mini MBA course, and focuses on real business, technology and industry issues. It is designed to give participants a critical understanding of the key competency areas required for organisational and individual success within the modern telecommunications industry.

Programme Content

- Strategy/Business Environment
- Technology
- Finance
- Leadership & Change Management
- Marketing & Customer Centricity
- Business Simulation

7. Digital Services and Technology Transformation

Distance Learning - 3 months

This programme looks at the changing role of Telecommunication Operators—and how they are responding to changing market conditions and customer expectations by repositioning as Communications Service Providers; adopting a range of digital services and undergoing major transformation initiatives.

Modules

- ICT, Unified Communications & Advanced Digital Services
- Technology Transformation—Virtualisation, Cloud & Convergence
- Managing Services, PCC and Billing

MARKETING, SALES & CUSTOMER FOCUS IN TELECOMS

1. Customer Experience Management (CEM) in Telecoms

Classroom - 2 days

With mobile telecoms markets nearing or above 100% penetration and competition rife, managing churn and building life-long loyalty is now a matter of survival. Now is the time for you to begin developing customers as true assets to your company. This will involve a total re-think of your current customer relationship strategy and realignment of your organisation with your customers' expectations, delivering total satisfaction at all times.

Building true loyalty by developing a proactive, holistic, ecosystem wide approach to total Customer Experience Management so that your customers become advocates for your products and services. Your customers are your assets: understanding their value drivers and delivering on those, nurturing their experience and delivering on your brand promises at every touchpoint will build their trust, loyalty and ultimately deliver a return on investment by reducing churn and increasing customer lifetime value and profitability.

Course Contents

- Can CSP's earn their customers' love?
- Defining end-to-end CEM
- Mapping the customer experience
- Implementing end-to-end CEM

2. Customer Value Management in Telecoms

Classroom - 2 days

Most telecoms markets around the world have been categorised as 'mature', with over 100% subscriber penetration. Along with market maturity, operators and service providers are experiencing stagnating revenues and falling profitability.

A huge opportunity to grow is by maximising the value of their existing customer base. This does not necessarily just mean selling more products or services to the same customers to prevent them from leaving the network, or engaging in short term churn management activities. A more holistic approach to managing the value of customers as long-term assets to the service provider is required if their full lifetime potential is to be realised. Service providers that do not fully master the techniques of customer value management will lose out to competitors that better understand the underlying growth potential of their customer base in a more holistic manner.

Course Contents

- Defining customer value management
- Calculating customer value
- Improving the quality of the customer base
- Using customer big data to generate value
- Influencing customer value
- Managing customer costs
- The role of third parties

3. Customer-Centric Pricing Strategies for Telcos

Classroom - 2 days

This is designed to enable delegates to design and implement an effective pricing strategy that focuses on customer value and to optimise revenues and profitability over the long term. This course helps delegates to establish a pricing strategy that is based on true value to consumers of telecoms services in their broadest sense. The course uses cases studies and benchmarks from the telecoms sector along with examples from other leading sectors that make the maximum use of pricing, to demonstrate best practice.

Course Contents

- Market trends and the implications for pricing
- The pricing manager's toolbox
- Competitive analysis
- Pricing in the marketing mix
- Pricing "Touch points"
- Pricing tactics
- The product life cycle
- Customer lifetime value/profitability

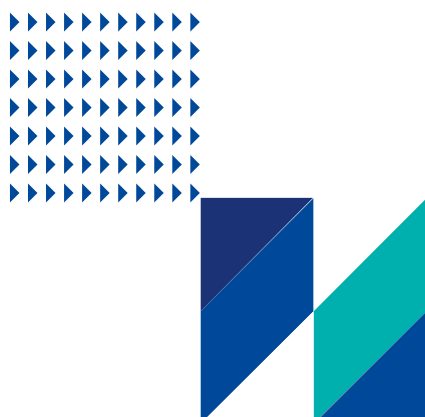
4. Marketing Digital Services

Classroom - 2 days

This interactive and hands-on programme examines the major trends and developments within the global digital services market, describes in detail the different digital services ecosystems and relative positions of the various players, explores segmentation and positioning options for different categories of digital services, and applies the advanced marketing mix to enable marketers to adapt their traditional skills to this demanding new environment.

Course Contents

- The business of telco-enabled content and entertainment
- The content and entertainment ecosystem
- Bringing innovative digital services to market
- Implementation factors



MARKETING, SALES & CUSTOMER FOCUS IN TELECOMS (CONTINUED)

5. Telecoms Marketing & Developing the Customer Proposition

Distance Learning - 3 months

Focusing on the role, techniques and implementation of marketing practices within Telcos/CSPs. We examine the changing telecoms marketplace and evolving business models; evaluate the developing customer propositions; and discuss how effective segmentation and customer engagement allow operators to maximise both B2C and B2B opportunities.

Modules

- The Telecoms Business Environment
- Marketing Telecoms & Digital Services
- Customer Engagement & Branding

6. Advanced Selling Techniques

Classroom - 2 days

This advanced sales curriculum course rapidly builds the key competencies that enable sales professionals and business development specialists to develop a systematic approach to selling technical, digital and ICT solutions; and excel at designing and finding solutions for customers' complex business needs. Participants will learn practical methods to create a powerful business case that will motivate both technical and non-technical decision-makers.

Course Contents

- Explain and apply concepts of customer focused selling for complex technology solutions
- Ask effective questions to better understand client needs and sell technical and enterprise solutions and lead a customer to becoming a buyer using return on investment
- Understand the motivations of the customer to deliver a solution-orientated product/service
- Implement methods of up-selling and cross-selling your product/service
- Review your competition and develop a comprehensive strategy to overcome these
- Develop a systemised and consistent follow-up and support process to develop more customers, repeat and referral business

7. Retail Selling Techniques for the Telecoms Industry

Classroom - 2 days

Retail Selling in a telecoms environment has long been one of the most competitive sales environments and the competition only continues to increase. It is vital that telecoms operators make the most of all marketing spend and every customer by giving retail sales staff the skills and confidence to professionally manage, control and close sales including complex digital and ICT products and ensure repeat business.

Course Contents

- Ask effective questions to better understand client needs
- Learn to control the sale and lead a customer to becoming a buyer
- Learn effective techniques for minimising and negating the need to discount
- Understand master and implement sales psychology techniques
- Learn cross selling and upselling
- Master effective techniques for closing and ensure repeat business and referrals

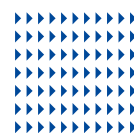
8. Strategic Account Planning

Classroom - 5 days

This intensive workshop covers the essential knowledge needed to best enhance the profitability of the accounts you manage. You will leave the training with the skills to build long-lasting relationships to improve client retention rates and develop cross and upselling opportunities within new and existing key accounts.

Course Contents

- Financial performance: How to research and determine likely future business objectives
- Environmental analysis: How to evaluate a client's business environment
- Competitor matrix: Developing a competitor matrix to understand your client's objectives
- Working out a relationship and communications plan for each of your account
- Relationship levels: Migrating from a tactical to a strategic relationship
- How to create a multi-level influencing strategy for all areas of the clients' business
- Assessing your client's organisational culture and adapting to it
- Safeguarding your Account - Building barriers to attack



9 MONTH DIPLOMA DISTANCE LEARNING PROGRAMMES



University accredited Distance Learning programmes – Enhance your career with an internationally recognised qualification.

Our Distance Learning programmes have been fully accredited by, and are offered in partnership with the University of Derby; a UK-based university highly acclaimed in the area of employer engagement.

What Accreditation means:

- **Fully aligned with UK University structure** – each course has been thoroughly audited and aligned with the UK University structure and credit system
- **Study towards a recognised university qualification** – successfully complete any accredited programme and you'll be able to qualify for a University qualification
- **Further your career** – have the confidence that your qualification will be recognised across the industry.

The modular structure of these programmes offers for a good degree of specialisation and allows you to tailor your programme to suit you and your organisation's individual learning needs.

1. Diploma in Telecoms Business

Distance Learning - 9 months

Core Modules

- Telecoms Business Environment
- Finance for Telecoms Professionals
- Marketing Communications Services
- Operating Effectively in Telecoms

Specialist Modules (select 5)

- Telecoms Technologies
- Project Management in Telecoms
- Customer Engagement & Branding in Telecoms
- Future Business Models for ICT Players
- Customer Relationship Management in Telecoms
- Sales and Value Chain Management
- Budgeting and Forecasting in Telecoms
- Access Network Technologies
- Digital Television and IPTV
- OSS, BSS and Billing

2. Diploma in Evolving Technologies

Distance Learning - 9 Months

Core Modules

- Communication and Connectivity: Supporting Fast-Changing Societies
- The Telecoms Business Environment
- Access Network Technologies
- Core Network Technologies

Specialist modules (select 5)

- Mobile Broadband Technologies
- IP Networks and Systems
- Traffic Engineering, QoS and MPLS in IP Networks
- Connected TV and Multimedia
- Security and Fraud Prevention
- Radio Principles
- Radio Network Planning
- Maximising LTE Performance and Efficiency
- Technologies 2020
- Towards 5G: Markets and Technologies

3. Diploma in LTE & 5G

Distance Learning - 9 months

Core Modules

- Modern Telecoms
- Enabling Technologies
- Delivering Advanced Services
- Telecoms Business Models

Specialist Modules (select 5)

- Access Network Technologies
- Core Network Technologies
- ICT and Advanced Digital Services
- Connected TV—Internet Protocol for Television Transmission
- Managing Services, PCC & Billing
- Marketing Next-Generation Services
- Operating Effectively in Telecoms
- Advanced Radio
- Advanced IP
- Security and Fraud Prevention

4. Diploma in Telecoms Technologies and Business Strategy

Distance learning – 9 Months

Core Modules

- Telecoms Business Environment
- Effective Commercial Performance
- Telecoms Technologies: A Comprehensive Introduction
- Technologies 2025

Specialist Modules (select 5)

- Towards 5G: Markets and Technologies
- Introduction to LTE: Markets and Technologies
- Access Network Technologies
- Core Network Technologies
- Radio Principles
- Developing Customer Centricity: CEM and Branding for Telecoms
- Project Management in Telecoms
- Finance for Telecoms Professionals
- How to Win at Telecoms: Management and Leadership Techniques



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