Telecoms & Tech Academy

DISTANCE LEARNING

COURSE DESCRIPTION

DIPLOMA IN EVOLVING TECHNOLOGIES

Format:
Distance Learning

Duration:
9 Months

KNect365 Learning

an informa business

PROGRAMME SUMMARY

WHY STUDY BY DISTANCE LEARNING?

- **Delivered by Telecoms Academy, part of KNect365 TMT an Informa Business, specialists in high quality training for the communications industry – both business and technology**

- **Uniquely includes strategic insight, key market data and forecasts provided by Ovum's 180 global analysts**

- **Tried and tested, fully supported blended learning that works, including soft copy course notes, video modules, live webinars and tutorials and full tutor access throughout your studies**

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"The course has so much depth that it demystified telecoms technology for all to understand, the textbooks, webinar sessions, learning material were excellent…. The tutors were magnificent, they explained in detail and they gave real practical examples

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THE PROGRAMME

Companies involved in the telecoms sector need high-quality people with the right knowledge and competencies to effectively build and maintain competitive advantage. The Diploma in Evolving Technologies has been designed with this requirement fully in mind.

This nine-month distance-learning 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.

THE PROGRAMME FORMAT

The modular structure allows you to customise the programme to support your aspirations and to fulfil your individual and organisational requirements, you study an introductory module, four core modules, followed by five elective modules.

Each module is designed to be studied over a period of a month and requires 20 hours of direct learning. Comprehensive courseware comprise written modules, self-test exercises, video tutorials, Live on Web tutor support, topic-specific webinars, supporting material (including our newsletters, as well as trends and analysis by Ovum), best practice discussion groups, and comprehensive learning packs.

Assessment is on-line and can be done in your place of work or study, subject to invigilation, and requires both short/ multiple choice answers as well as longer written essay submissions.

KEY BENEFITS

1) The courses are examined and qualifications awarded by the biggest global provider of research, intelligence, events and training to the telecoms industry.

2) Flexible modular course structure allows you to study subjects most relevant to you and your business allowing you to create an individual programme.

3) You decide where and when to study and then set your own pace.

4) Through our mix of learning delivery methods and online support, we keep you fully engaged and progressing to ensure you meet the required standard.

5) Regular webinars are provided, covering the latest technologies, business processes and industry developments – with real subject matter experts who thoroughly understand the topics and their relevance to the industry.

6) Each course has been developed specifically by the Telecoms Academy with input from the Informa research teams to ensure the courseware is relevant to you and your organisation, and is stimulating and engaging.

7) You will have full tutor support from a dedicated tutor – all our tutors have a wealth of real-life industry experience and are now dedicated training professionals, they are available to give help and advice throughout your studies.

Book online: telecomstechacademy.com

Book over the phone: +44 (0)20 7017 4144

Book via email: training@telecomstechacademy.com

PROGRAMME SUMMARY

STUDENTS COMPLETE 10 MODULES
(4 CORE AND 5 SPECIALIST MODULES)

COURSE MODULES (4 MODULES)	SPECIALIST MODULES (SELECT UPTO 4)
C1 — Communications and Connectivity—Supporting Fast-Changing Societies	**E1** — Mobile Broadband Technologies
	E2 — IP Networks and Systems
	E3 — Traffics, Engineering, QoS and MPLS in IP Networks
C2 — The Telecoms Business Environment	**E4** — Connected TV and Multimedia
C3 — Access Network Technologies	**E5** — Security and Fraud Prevention
C4 — Core Network Technologies	**E6** — Radio Principles
	E7 — LTE Radio Network Planning
	E8 — Maximising LTE Performance and Efficiency
	E9 — Technologies 2020

ENHANCED LEARNING SOLUTIONS

MANAGED LEARNING SYSTEM

This has been developed in order to offer convenient and flexible access to resources such as course material, frequently asked questions, practice examinations and tutor support.

FULLY ILLUSTRATED COURSEWARE

Soft copy course notes, delivered in context and full regard to current trends, data and analysis from the Ovum research team, practical exercises and self-assessment tests in preparation for exams.

REGULAR NEWSLETTERS

We keep you up-to-date with your studies and major events in the industry through regular newsletters available throughout the duration of your course.

TUTORIALS

Regular informal tutorials to discuss the programme, ideas and progress, they give a chance to meet with tutors and other students online.

VIDEO LESSONS

Informative videos used to outline key study points and to set the context for study and consolidate ideas. The lessons compliment the study material to maximise learning and engagement.

LIVE WEBINARS

Enhance your learning with live webinars, bringing the latest technologies and business management topics that allow you to consolidate your learning.

CORE MODULES
DELEGATES STUDY ALL 4 MODULES

C1 COMMUNICATION AND CONNECTIVITY—SUPPORTING FAST CHANGING SOCIETIES

- The First and Second Digital Tevolutions
- The Need for Change
- The Challenge from OTT
- The Cloud
- M2M and Big data
- The Internet of Things
- Connected Environments
- The End-to-End Digital Enterprise
- Digital Solutions Enterprises
- Virtual Reality
- Technology Outlook Overview
- Wireline Access Evolution
- Wireless Access Evolution to LTE-A Pro
- 5G and Other Wireless Solutions for IoT
- SDN & NFV

C2 THE TELECOMS BUSINESS ENVIRONMENT

- Core Business Trends—Fixed
- Core Busioness Trends—Mobile
- Mobile Broadband Trends
- Shareholders' Expectations
- Customers' Expectations
- Third Parties' Expectations
- Spectrum and Infrastructure Provision
- Mobile Broadband Service Provision
- The Services Landscape
- Enterprise Services
- The Internet of Things (IoT)
- The Consumer Sector
- Dealing with Current Issues
- The Future of Telcos

C3 ACCESS NETWORK TECHNOLOGIES

- Access Networks
- Cable Access Networks
- Fibre Access Networks
- EFM (Ethernet in the First Mile)
- Wireless Technology Evolution
- Third-Generation Technologies
- CDMA2000 (3GPP2) Evolution
- LTE (Long Term Evolution)
- LTE-A (LTE Advanced)
- WLANs and WPANs
- WiMAX
- WiMAX Operation
- NGN and IMS Network Access

C4 CORE NETWORK TECHNOLOGIES

- Core Network Fundamentals
- Ethernet and the Metropolitan Area Network
- WAN Technologies
- Transmission in the Core Network
- Next Generation Networks
- IP Explained
- Quality of Service Requirements
- IP in the Core Network
- Towards All-IP Networks
- SIP (Session Initiation Protocol)
- Associated Protocols
- IMS Overview and Services
- IMS Architecture

SPECIALIST MODULES
DELEGATES CHOOSE UP TO 4 MODULES FROM:

E1 MOBILE BROADBAND TECHNOLOGIES

- Overall Market Trends
- Mobile Broadband Market Trends
- Background to 3G Development
- Core Network Evolution
- LTE Architecture Overview
- LTE Core Technologies
- The LTE Protocol Stack
- IEEE 802 Technologies
- Mobile Technology Outlook and Challenges
- LTE-A Framework and Key Features
- SDN and NFV
- 4G Services, Applications, and Devices
- Towards 5G
- 5G Technology Outlook

E2 IP NETWORKS AND SYSTEMS

- Introduction to TCP/IP
- IPv4 Addressing
- IPv6
- Routing through IP Networks
- IP Applications
- Proof of Identity
- Protection of Privacy
- Protection of Resources
- Quality of Service
- IP Layer WoS Mechanisms
- Dimensioning a Multimedia IP Network
- IP Telephony and VoIP
- H.323, MGCP, and H.248/Medgaco
- SIP (Session Initiation Protocol
- IMS (IP Multimedia Subsystem)
- VoLTE (Voice Over LTE)
- GPRS
- UMTS
- LTE
- QoS in LTE
- EPC Protocols Overview
- PMIPv6 (Proxy Mobile IP version 6)

E3 TRAFFIC ENGINEERING, MPLS AND QOS IN IP NETWORKS

- An Overview of QoS
- QoS and Privacy
- QoS and Protection
- QoS Within the IP Layer
- The LTE QoS Concept
- Introduction to MPLS
- Label Distribution
- LDP Procedures
- Traffic Engineering
- Content Delivery Networks (CDNs)
- Security Framework for MPLS and GMPLS Networks
- MPLS Authentication and Encryption
- MPLS-VPN Services Overview

E4 CONNECTED TV AND MULTIMEDIA

- The History of Television
- Technology
- Mobile Video
- Streaming and Download Services
- Internet Video
- Downloading Services
- Digital Rights Management (DRM)
- Big Screen Viewing
- Developing Technologies
- Case Studies

E5 SECURITY AND FRAUD PREVENTION

- The Evolution of Network Security
- Security Models
- Other Security Issues
- Secure Execution Environments
- Popular Smartphone Platforms
- Mobile Payment Technologies
- IP (Internet Protocol) Deployments
- Threats from Staff
- Developing Security Issues

E6 RADIO PRINCIPLES

- Radio Spectrum Basics
- RF and Baseband Signals
- Decibels (dB) and Noise in RF Theory
- Modulation Schemes
- Principles of Propagation and Path Loss
- Sharing the Radio Spectrum
- Multiple-Access Methods
- Principles of Cellular Frequency Reuse
- Capacity in Cellular Radio Systems
- Cell Size and Link Budgets
- GSM Physical Channels
- GSM Logical Channels
- GSM Procedures
- GSM Dedicated Mode Procedures
- GPRS Air Interface and EDGE
- WCDMA Principles
- UMTS (WCDMA) Codes
- Air Interface Channels and Protocol Structure
- UMTS Procedures and Techniques
- Spectrum for LTE
- OFDMA and SC-FDMA
- LTE Procedures
- Antenna Techniques for LTE

E7 LTE RADIO NETWORK PLANNING

- The Radio Planning Lifecycle
- RF and Baseband Signals
- Decibels (dB) and Noise in RG Theory
- Modulation Scheme for LTE
- Multiple Access Schemes
- Propagation Basics
- Mechanisms of Propagation
- Interference and frequency Reuse
- Advanced Antenna Techniques for LTE
- Defining a Link Budget Statement
- Transmitter Power in LTE Link Budgets
- eNB and UE Antenna Performance
- Calculating Sensitivity
- System Gain and Maximum Path Loss
- Path Loss Modelling

SPECIALIST MODULES

E8 MAXIMISING LTE PERFORMANCE AND EFFICIENCY

- Optimising the Radio Network
- Idle Mode Procedures and Mobility
- Connected Mode Procedures and Mobility
- Introduction to LTE-A
- CA (Carrier Aggregation)
- Relay Nodes, CoMP, and MIMO Enhancements
- Introducing Small Cells and HetNets
- Small Cell Planning Considerations
- Small Cell Performance
- Managing Interference

E9 TECHNOLOGIES 2020

Details TBC

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

DS, CABLE & WIRELESS BARBADOS

OUR TRAINING SERVICES

TELECOMS ACADEMY STRUCTURE

Our training programmes are delivered worldwide as part of the training and development plans of many operators, vendors, and service providers. The programmes cover a wide range of competency development requirements.

To ensure we meet the training needs of the industry as effectively as possible, we operate three schools:

School of Telecoms Management
Business training tailored to the telecoms industry, ranging from the intensive 5-day Telecoms Mini MBA to specialist leadership and marketing training.

School of Advanced Communication Technologies
Covering a multitude of technologies, these courses range from overviews aimed at nontechnical staff to in-depth engineering training.

Distance Leaning
Our comprehensive suite of Distance Learning programmes provide an excellent opportunity to expand knowledge and build confidence.

OUR TRAINERS

We only use trainers and programme directors that satisfy the following three criteria:

- Experts in their field
- High level of industry experience
- Expert facilitators and training professionals.

All our trainers have undergone a rigorous election process and are subject to continuous monitoring and evaluation. Each trainer is accredited for specific courses or topic areas. Whether engineers or business experts, all our trainers are required to continue their own development within their specialist areas, and to broaden their Industry view of trends, best practice and technology.

This is achieved by our on-going work with many tier 1 operators and vendors, and by full exposure to Ovum research and KNect 365 TMT worldwide events.

UNIVERSITY ACCREDITATION

Some of our programmes have been accredited by the University of Derby Corporate (subject to final validation); a UK-based university highly acclaimed in the area of employer engagement. They are at the forefront of the drive to integrate highly focused industry -led training with the academic rigor and quality control of university-based education. Our comprehensive Advanced Telecoms Management Series have been accredited postgraduate level, (subject to final validation) with our extensive suite of Distance Learning at undergraduate level.

We would be happy to discuss extending accreditation to tailored ATMS or programmes based on our Distance Learning modules. Although accreditation is specific to these programmes, the work we do with the University of Derby enable us to develop and apply best practice across our portfolio.

CUSTOMISED IN-HOUSE TRAINING

Telecoms Academy has worked with countless companies to deliver customised training programmes. We take time to understand your requirements, you'll work with our specialist training team to ensure that we deliver your perfect training programme for your business.

A customised training programme from Telecoms Academy ensures you get a course that precisely matches your organisation's needs, presented by a first-rate training organisation, with access to all the latest industry research and analysis.

WHY CHOOSE IN-HOUSE TRAINING FROM TELECOMS ACADEMY?

- Content can be customised to focus on the issues you want – work with us to develop the training course to match the exact needs.
- Unique industry research – from Ovum's team of industry leading analysts
- Expert trainers – our team of versatile trainers have the knowledge and experience to deliver a highly effective learning experience
- The most efficient way to train your staff – at the time and location to minimise disruption
- Flexible delivery options – with a range of instructor led, distance learning and virtual classroom formats available you can build a blended solution to maximise training effectiveness over the long term
- Pre -and post-course assessment – can be included in programmes to measure competencies and check on the required progress.

Contact us to discuss how we can build your perfect programme.

www.telecomstechacademy.com

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Learning

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