Telecoms & Tech Academy

COURSE DESCRIPTION

5G TECHNOLOGY

Format:
Classroom or
Live on Web

Duration:
2 Day or 4 x 3
Hour Modules

Brought to you by informatech

COURSE SUMMARY

HIGHLIGHTS

- **Highly focused and in-depth training from the experts - including relevant updates from Informa's extensive research team**
- **Trainers and programme directors that are experts, industry experienced, and highly accomplished training professionals**
- **Training outcomes and competency development designed to meet industry and organisational requirements**

"The course was good and very helpful, the teacher was well up to the task!

GCL, Econet

COURSE SUMMARY

In this programme we explore the concepts of 5G technology, including capability requirements, the technologies that will deliver the core capabilities, and the impact on the customer proposition. We look holistically at the role of 5G in the technology roadmap and what it means for communication services providers (CSPs).

Topics including current standardisation work, regulation and industry activity; usage scenarios and deployment options; performance; capacity requirements; interoperability; security requirements; architectures; spectrum; and the impact on business models are all discussed.

Participants will build a comprehensive picture of 5G, as it stands, enabling them to make more informed technology and business decisions and contribute more effectively to successful strategy development.

AVAILABILITY

All our programmes are available on a customer-specific basis:

- Fully Customisable
- Range of delivery formats available
- PACE-enabled: maximise learning & ROI
- Experienced consultants and trainers

OUTCOMES & COMPETENCY DEVELOPMENT

Participants will develop or be able to:

- Contribute much more effectively to decision making and medium / long term strategy development within your organisation.
- Evaluate implementation options for 5G, building knowledge of a comprehensive set of technology / deployment scenarios, and identifying the use case that each combination can effectively support.
- Develop technology solutions and roadmaps that are better aligned with the expected industry direction and that take account of latest technology developments and initiatives.
- A solid foundation on which to build organisational competency development plans to ensure opportunities arising from 5G can be maximised.
- Confidence to set expectation and drive internal debate on advanced technology issues, and to better evaluate solutions in terms of commercially viability, risk, and strategy.

Book online
telecomstechacademy.com

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

Book via email
training@telecomstechacademy.com

COURSE CONTENTS

OVUM OPERATOR SURVEY OF 5G

A brief opening session presenting the findings of recent survey of mobile operators in which the respondents answered questions on when 5G will be available, the key 5G technologies and probable utilisation of 5G services.

DEFINING 5G, MARKET DRIVERS AND USE CASES

- 5G as a Concept
- Market Drivers for 5G
- Key Requirements & Design Principles
- Performance Requirements
- Consumer Device Issues
- Supporting Video and TV
- 5G, M2M and the Internet of Things
- Broadcast & Multicast
- Advanced Use Cases
- Smart Sensors
- HD City
- Augmented Reality
- Stadium
- Public Safety / Emergency
- Organisations Driving 5G Development
- Standardisation Roadmap
- 5G and LTE Co-existence
- Spectrum, Licensing and Regulatory Issues
- Impact of 5G on CSP / Operator Strategy
- Case Studies

CORE NETWORK CONCEPTS

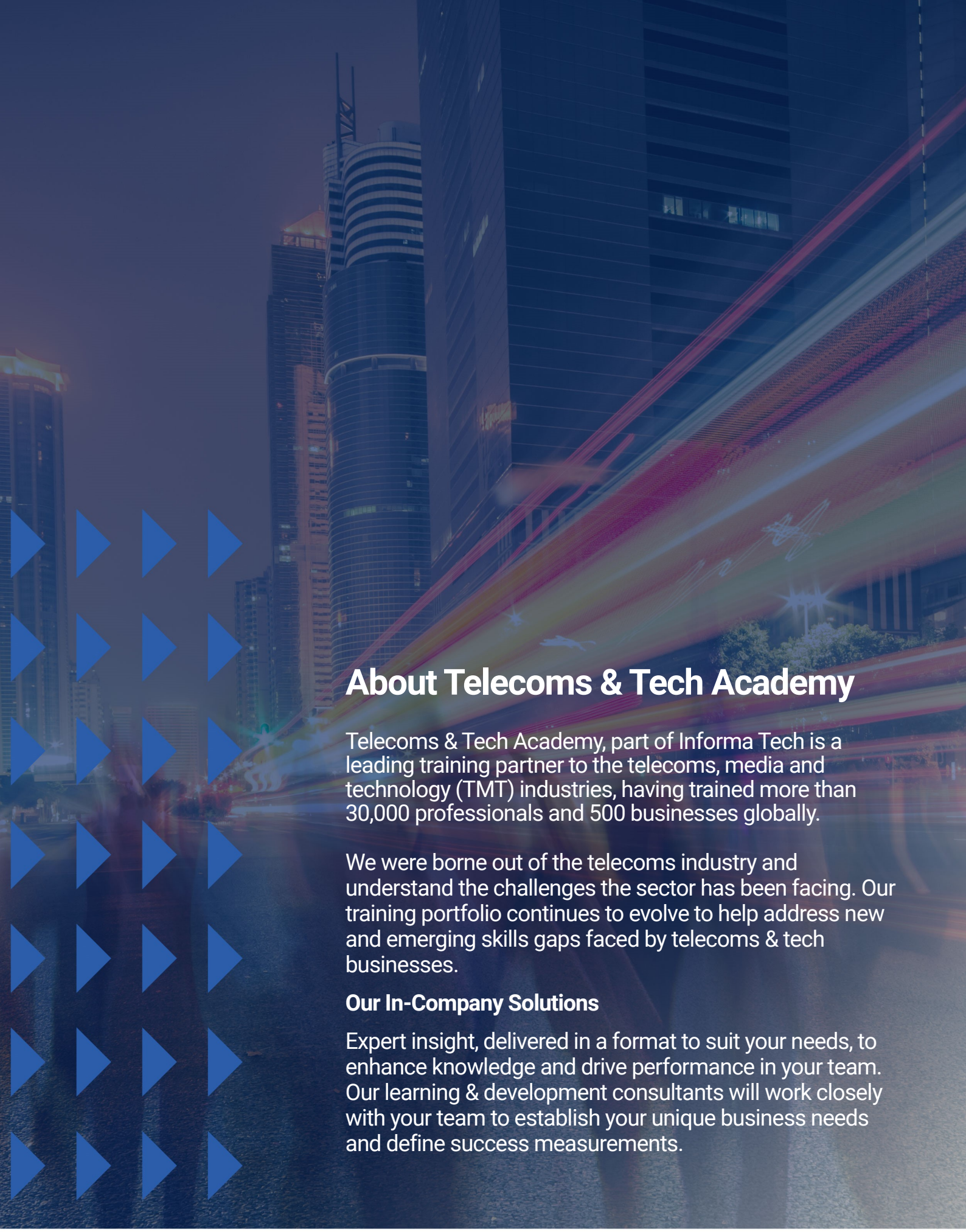
- Current network performance and Required Improvements
- Design Principles for 5G
- Radio Network
- Core Network
- Operations and Maintenance
- Networking Technologies for 5G
- Network Function Virtualisation
- NFV Concepts
- NFV Benefits and Challenges
- NFV in 4G Networks
- Software Defined Networks
- SDN Concepts
- SDN Benefits and Challenges
- SDN in 4G Networks
- 5G Core Network Concepts
- Overall Network Picture and Ideas
- Functional Areas of the 5G Network
- Network Slicing Concepts
- Network Slicing Examples
- NFV and SDN in 5G
- Mobile Edge Computing
- ETSI Reference
- MEC Architectures
- MEC Examples

NETWORKS AND TECHNOLOGIES

- Introducing 5G RAN
  - 5G RAN Performance
  - Spectrum Requirements for 5G
  - Evolving LTE toward 5G
  - Co-Existence and Backwards Compatibility
  - Application Requirements for 5G Radio
- Low Latency Design
  - Bandwidth Scaling
  - High Efficiency Radio Frame
  - Low Latency Radio Frame Structures
- Multiple Access for 5G Radio
  - Multiple Access Concepts and Design Targets
  - Candidate Multiple Access
  - Multiple Access Compared
  - NOMA
  - Radio Waveforms for 5G
  - Waveform Requirements
  - Candidate Waveforms
  - Waveform Comparisons
  - MIMO in 5G
- RAN Architecture
  - Current and Future RAN Access
  - RAN Protocols and Transmission
  - Fronthaul and Backhaul requirements
  - CPRI Concepts for Fronthaul
  - D-RAN and C-RAN
  - User Plane Aggregation

5G TECHNOLOGIES AND

5G RADIO ACCESS



About Telecoms & Tech Academy

Telecoms & Tech Academy, part of Informa Tech is a leading training partner to the telecoms, media and technology (TMT) industries, having trained more than 30,000 professionals and 500 businesses globally.

We were borne out of the telecoms industry and understand the challenges the sector has been facing. Our training portfolio continues to evolve to help address new and emerging skills gaps faced by telecoms & tech businesses.

Our In-Company Solutions

Expert insight, delivered in a format to suit your needs, to enhance knowledge and drive performance in your team. Our learning & development consultants will work closely with your team to establish your unique business needs and define success measurements.