Telecoms & Tech Academy

IOT TECHNOLOGY & BUSINESS

Format:
Online Academy

Duration:
5 Modules

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IOT TECHNOLOGY & BUSINESS PROGRAMME

COURSE OVERVIEW

IoT is the next big thing for both operators and associated industries. However in order to address the scale of the potential market it is important that there are industry standards established to support all elements of the IoT ecosystem.

This programme will focus 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

Amongst other issues that must be considered for IoT deployments are spectrum availability and suitability, and the activities of the regulators in supporting this. Security for massively deployed IoT/M2M systems is also a concern for the operators and will be reviewed in this programme.

PROGRAMME MODULES

1) IoT Overview

2) IoT Standardisation

3) IoT Enabling Technologies

4) Existing & Proposed Technologies

5) Spectrum for IoT

6) IoTtechnologies

7) IoT Market Trends & Busiess Cases

8) IoT Business

9) IoT Strategy

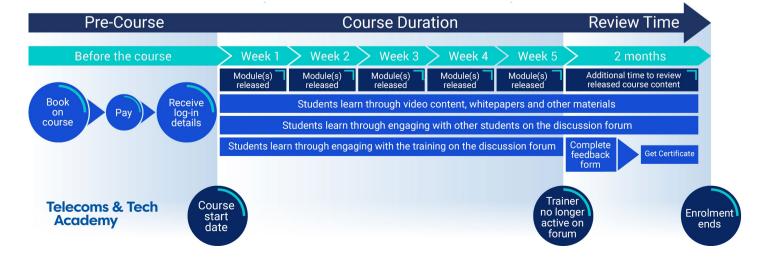10) IoT Privacy & Security

WHAT WILL YOU LEARN

Attending this course will empower you to develop or be able to:

- An understanding of the scope and scale of the IoT market
- An awareness of the range of technical solutions for connected IoT
- Develop business solutions for the connected device market
- Understand the current trends related to the technology and business of IoT
- Appreciate the performance differences of the various technologies available today
- Fully understand the evolution of the technology and market
- Show the differences in technology from several standards bodies and proprietary developers
- Develop connected device strategies based on market opportunities and technology availability

BENEFITS OF ONLINE ACADEMY

- **Boost your resume** — with self-paced learning and advance your career with specialist technical skills

- **Convenience and flexibility** — Learn whenever you want – from the comfort of your home or office

- **Enabled for mobile** – make use of downtime with easy bite sized chunks of learning

- **Learn and apply right now** – immediately implement what you learn during the course

- **Become part of a professional learning community** — discuss any problems with students and the Course Instructor

- **Cost effective** — save on travel expenses, reduce unproductive down time and no crowded airports

- **Grow as a team** — with multiple licenses your team can access the course and learn together, no matter where they are in the world

WHAT HAPPENS DURING YOUR ONLINE ACADEMY COURSE?

PROGRAMME MODULES

IOT OVERVIEW

- IoT Definitions
- What is IoT/M2M
- Type of Devices
- IoT history and evolution
- IoE, Internet of Everything
- Machine to Machine vs IoT
- IoT Applications and Services
- What constitutes a thing
- Why IoT?
- The IoT Ecosystem
- Industry Predictions and Market Trends
- Gartner Hype Curve
- Telcos and IoT
- Vendors and Operators
- Revenue Opportunities from IoT

IOT STANDARDIZATION

- IOT Reference Model
- ISO, International Organization for Standardization
- ITU,
- IEEE
- IETF,
- Internet of Things Europe
- CEN/CENELEC
- ETSI
- IIOT, Industrial IoT
- Other bodies

IOT ENABLING TECHNOLOGIES

- Big Data Intro
- Big Data Analytics
- NoSQL
- Hadoop
- IOT Architecture
- Network Topologies for IoT
- High-Level Languages
- Processing power
- Power considerations
- SoC, System on a Chip
- DSP and GPPs
- H/W Miniaturisation
- Low Power LAN/PAN

EXISTING AND PROPOSED TECHNOLOGIES

- Cloud computing – Service Models
- Cloud Classification
- Agents
- Technology Comparisons
- Hardware and firmware
- Sensors and wireless sensor networks, WSNs
- Intelligent Electronic Device, IEDs
- Identification
- SDN and NFV
- Building the IOT Technology
- Enablers, Engagers, Enhancers
- Different Connectivity alternatives
- Wireless technology parameters
- Wired connectivity
- Cellular IoT: GSM, WCDMA, LTE

PROPRIETARY - PROPOSED TECHNOLOGY

- The road to Cellular Internet of Things
- LTE-M
- NB LTE vs Cellular IoT, CIoT
- 3GPP Rel.12defined MTC devices
- 3GPP Stadardization
- The Triangle of 5G Use Cases
- Cellular Evolution
- Different deployment scenarios for 4G systems
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SPECTRUM FOR IOT

- Spectrum Availability and Use Cases
- Frequency bands
- Licensed spectrum vs Proprietary solutions
- Unlicensed sub-GHz bands
- Shared/Unlicensed Spectrum
- IOT in Licensed Spectrum
- Dedicated Spectrum
- White Space
- Dynamic Spectrum Allocation
- Weightless
- Low Band VHF for Business Radio
- Sensors on shelves

IOT TECHNOLOGIES

- Networking Technologies
- Requirements and characteristics
- Functions and Services
- Comparison of wireless standards
- NFC
- Wireless Ethernet and IoT
- 6LoWPAN and IEEE 802.15.4
- Zigbee
- Z-Wave
- Sigfox
- LoRa
- Weightless Architecture
- Wi-Fi ac, ah, ai
- Bluetooth and IoT
- The Thread Group
- KNX

IOT MARKET TRENDS AND BUSINESS CASES

- Consumer and Enterprise M2M
- Global Market Penetration
- Industry Trends
- Potential IoT Markets
- Access Technology Traction and market size
- IoT Value Chain
- Monetising IoT
- Revenue Opportunities from Internet of Things
- Digital Transformation Priorities
- Partnerships and Collaboration
- Studies
- Connected Cars
- Smart Cities/Homes
- Insurance

PROGRAMME MODULES

IOT BUSINESS

- Kickstarter and other crowdfunding platforms
- Business Model
- IoT challenges for adoption of business models
- Classic business model
- How the Internet of Things is changing business models
- Example: the Bosch Business model

IOT STRATEGY

- IoT Ecosystem business strategies
- Strategic choices for IoT
- Connectivity technology in the context of IoT launch strategy
- A company's IOT Strategy
- Operator strategies
- IOT Integration into Business Processes
- IoT Applications and Business cases

IOT PRIVACY AND SECURITY

- Security in IoT implementation
- Security evolution
- Beecam's new IoT Security Threat Map
- Industry attempts to Secure IoT
- Regulatory, Legal, and Rights Issues
- EU Data Protection Directive
- Protective Architecture
- End-to-end security
- Privacy
- Privacy-by-Design Principles
- Security and privacy examples
- Network and Device Security
- Use Cases and Security Challenges
- Privacy, Autonomy and Control
- Authentication/authorization
- Environmental impact
- Protective Architecture

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.

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