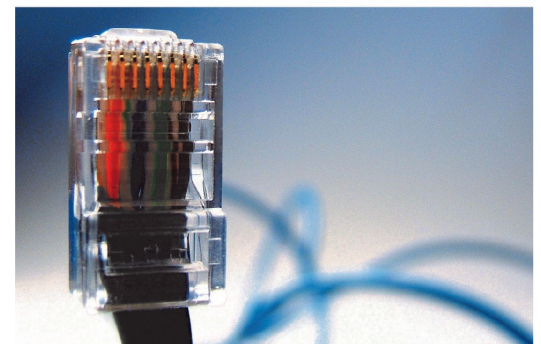


# LTE For Commercial Professionals

Face to Face ILT      1 Day (with 2-Day Option)  
Live on Web ILT      4 x 2 Hour Modules

## Course Highlights

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



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## Course Summary

This programme focuses on the main requirements for broadband wireless networks and how LTE / LTE Advanced proposes to meet those requirements. The business of LTE and the evolution of mobile broadband are examined, and comparisons are made with alternative and complimentary technologies, including HSPA and WiFi.

The technology itself is explained at an overview level, concentrating on the capabilities and its role in modern telecommunications. LTE network architecture (SAE) and the functions of each of the network elements are discussed, with a clear focus on service delivery and the systems that support it within the wider LTE infrastructure.

Overall, participants gain a good appreciation of the drivers behind the adoption of LTE technology, including the main capabilities, limitations, and usage cases of the technology - as well as the architecture and operation of LTE services.



## Learning with PACE



The key to effective learning is how the competencies (knowledge, skills and confidence ) are developed, and in particular, how they are **applied**, both within the training and then more importantly in the work place. Our programmes are designed around this belief using the principle of PACE – Preparation, Application, Consolidation, and Experience / Engagement. Some of the PACE features listed below will be included as standard, depending on your specific programme. We will build the appropriate features into your programme, but would be happy to discuss any specific requirements you may have:

### Preparation

- Pre course learning module(s)
- Online Webinars
  - Technology Primer
  - Topic-Specific Primer
  - Industry Update
- Pre-course assessment / quiz

### Consolidation

- Additional Telecoms Virtual Campus tutorials
- On-going Technology Analysis and white papers
- Post course tutor support
- Post course networking and interaction via our Linked-In Groups
- Post-course assessment / quiz

### Application

- Industry analysis from Informa Telecoms and Media analysts - applying the concepts to the industry
- Real Industry Case Studies and practical examples
- Exercises and Demonstrations
- Business Simulations
- Planning Exercises
- Industry and Technology Status Reports covering latest business trends and technology deployments

### Experience / Engagement

- Highly interactive delivery style
- Very experienced and highly focused trainers and Programme Directors
- Class dynamics moulded to facilitate maximum learning opportunity
- Full delegate participation in building and presenting business or technology plans
- Certified or Assessed training to focus learning



## Outcomes and Competency Development

**Participants will develop or be able to:**

- Discuss with confidence, the drivers and requirements of next generation wireless broadband networks, including changing market dynamics, and both service and technology evolution
- Explain the role of LTE in the future of mobile broadband
- Develop a foundation on which to build a deeper understanding of the value and commercial opportunities that LTE delivers
- Draw a simple schematic of the LTE network architecture, and describe the function of each LTE network element
- Highlight the main features that allow LTE to inter-work with other networks / technologies, and discuss the opportunities and benefits this brings
- Explain how different services are delivered and managed in the LTE system
- List and describe the methods of supporting voice services in LTE-based networks - including why the different options exist and the major benefits of each
- Describe how IMS may be used to support services across the LTE network



## Our Trainers

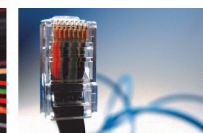
We only use trainers and programme directors that satisfy the following three criteria:

- Experts in their field
- High level of Industry Experience
- Expert facilitators and training professionals

All our trainers have undergone a rigorous selection 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 Informa Telecoms & Media research and world-wide events.

Sample biographies for some of our trainers can be found here: [www.informatelecoms.com](http://www.informatelecoms.com)



## Course Content

### Roadmap to 4G and Beyond

- 3.9G deployment
- IMT-2000 and IMT-Advanced
- LTE and LTE Advanced
- Migrating to 4G
- Key characteristics of IMT-Advanced systems
- Core 3.9G/4G technologies
- Software aspects
- Advanced modulation and coding schemes
- Advanced MIMO techniques
- Relay nodes
- 4G technologies
- Characteristics of 3GPP Release 10
- 4G services and applications
- 4G devices

### Context of LTE Services and Applications

- Service evolution up to 4G
- Limitations of 3G/3.5G services
- Requirements of mobile broadband networks
- Mobile broadband subscriptions
- Mobile broadband revenues
- Mobile broadband devices
- Technology deployment
- LTE launch strategies
- Mobile broadband business models
- LTE pricing strategies
- Bridging the price–revenue gap

### LTE Service Architecture

- LTE service and design objectives
- Evolution from circuit switching to all IP
- Objectives and advantages of deploying the EPS
- SAE architecture
- Control and user plane protocols
- EPC services
- E-UTRAN services
- LTE network bearers
- QoS considerations and mechanisms
- Security aspects for LTE

### Annex A

- The IMS concept
- IMS Releases

- IMS features
- IMS network architecture
- Mobility and roaming
- IMS deployment considerations
- The operator's view
- The user's view

### LTE Applications and Ecosystems

- Next-generation mobile applications and their requirements
- Mobile content and usage predictions
- Options for providing voice services over LTE networks
- Market development for voice
- Providing SMS over LTE networks
- Non-voice application classes
- How applications may be expected to change and grow over time
- Existing applications
- Emerging applications
- LTE ecosystems
- Applications development projects
- Devices – the importance of smartphones

### Additional Complimentary Modules:

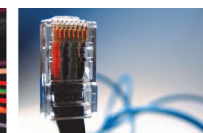
The following Modules compliment this programme - please enquire for details:

1. **Advanced Billing**
2. **Policy and Charging Control (PCC)**



TA Use: **Dip LTE & AC - M1 S3, M3 S1-4**





## Delivery Options

We can customise your company-specific programme to incorporate or focus on a range of topic areas. You will be guided by our experienced training developers, who will ensure that we produce and deliver a course that exactly matches your needs. We are happy to tailor the programme to use a number of delivery options:

- **Classroom (face-to-face)** - Take a course off the shelf or work with us to produce a customised programme to meet the exact needs of your business and employees.
- **Distance Learning** - Study at your own pace with our range of fully supported and university accredited distance learning programmes
- **Virtual Classroom** - Get the benefits of high quality, interactive instructor led training online without the associated travel costs
- **Blended Training** - Allows you to build programmes that are engaging, interactive and keep participants motivated and progressing
- **On-going Competency Development** - Maximise the training through a range of competency development and assessment tools

## PACE Enabled



Our programmes are PACE Enabled – a training method that optimises both training value and student engagement. It delivers highly efficient competency development that is focused squarely on practical application in the work place. It is simple in concept and comprises four key elements;

**Preparation** – Pre-course preparation in order to “hit the ground running”

**Application** – Applied Learning that focuses on practical application in order to maximise both training value and student engagement

**Consolidation** – Post-course continuing competency development, access to resources, access to tutors and on-going support

**Experience** – An outstanding end-to-end training experience designed to develop competences as effectively as possible

## Our Faculty Structure

Our training programmes are delivered worldwide as part of the training and development plans of many large operators, vendors, and service providers.

To ensure we fully meet the training needs of the industry, we have split our portfolio into specific schools that reflect the required competencies:

- **School of Telecoms Management** – Tailored to the telecoms industry and ranging from the intensive 5-day Telecoms Mini MBA programme to specialist leadership and marketing training.
- **School of Advanced Communication Technologies** – Covering a multitude of technologies, these courses range from in-depth engineering training to foundation programmes for non-technical staff
- **Distance Learning** – Our comprehensive suite of University Accredited Distance Learning programmes provide an excellent opportunity to expand knowledge & Competencies

## University Accreditation



Some of our programmes have been accredited by, and are offered in partnership with the University of Derby Corporate; 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 (ATMS) have been accredited at Level 7 (Post-Graduate), with our extensive suite of Distance Learning at Level 4 (Undergraduate Level). We would be happy to discuss extending accreditation (and university qualifications for the participants) 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.

## Further Details



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