Course Introduction

Providing a complete introduction to telecommunications, this 28-hour online course delivers one of the most comprehensive overviews of the industry currently available. Our content partner for this course, Wray Castle, has been the leading provider of training in the telecommunications industry for over 60 years.

The course will:

- Develop your knowledge and understanding of telecommunication technologies and networks
- Provide understanding of the basic concepts behind LANs, the Internet and IP protocols
- Allow you to develop your knowledge of 2G, 3G, and 4G mobile communications networks

Learning outcomes

- Understand the origins of telecommunications networks and systems.
- Discuss the development of digital telecoms techniques.
- Explain the basic concepts behind LANs, the Internet and IP protocols.
- Understand how 2G, 3G and 4G mobile communications networks work.
- Describe how fixed and mobile broadband are provisioned.
- Debate the requirements and development of future telecoms networks.
Expert multidisciplinary e-courses for engineers at all career stages

Course Units

- Unit 1 Defining Telecoms and the Nature of Information
- Unit 2 History of the telegraph and telephone
- Unit 3 Telephone call concepts
- Unit 4 The Public Switched Telephone Network (PSTN)
- Unit 5 Analogue and Digital
- Unit 6 Converting voice to digital
- Unit 7 Digital telephone exchanges and services
- Unit 8 Digital transmission systems
- Unit 9 Radio communications
- Unit 10 Background to computer networking
- Unit 11 Packet-switching principles
- Unit 12 The Ethernet protocol
- Unit 13 TCP/IP
- Unit 14 Internet operations and services
- Unit 15 Mobile networks
- Unit 16 Cellular concepts
- Unit 17 Mobile networks evolution
- Unit 18 The GSM - Global System for Mobile Communications
- Unit 19 GSM core network and identities
- Unit 20 Data over mobile networks
- Unit 21 UMTS - Universal Mobile Telecommunications Network
- Unit 22 LTE - The Long Term Evolution
- Unit 23 Developments in mobile networks
- Unit 24 Fixed broadband technologies
- Unit 25 Other broadband techniques
- Unit 26 Mobile broadband
- Unit 27 Utilisation of mobile networks for future services
- Unit 28 Final Assessment

Other related courses

- Mobile Communications
- Securing the Internet of Things
- Connected and Autonomous Vehicles

Who should take this course?

This course has been designed for those new to telecoms or for those requiring a better understanding of telecommunication technologies and networks.

Learners using this course could be from any background or industry sector, from apprentices through to senior managers.

Cost effective and flexible

For many engineers staying informed of changing technology in order to remain current in their role is paramount, however, finding the time and budget to attend external training is challenging. The IET Academy’s flexible learning platform allows access to training ‘anytime, anywhere’. Alternatively, course content can be quickly and easily integrated into an existing learning management system.

How to purchase

- To buy a single course or set of units for your personal learning go to the Academy online store www.theiet.org/academy
- For multi-user licences for your company email academy@theiet.org

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