Online course catalogue

Detailed course objectives and descriptions can be found at www.ptt.co.uk/catalogue

Introduction to telecommunications

Telecommunications fundamentals

Telecommunications security

Broadband access

Voice services

Computer networks

Wide area networks

Mobile and wireless networks and services

Optical transmission networks

Providing expert telecommunications and ICT training for over 30 years

Advantages of PTT online courses:

- Available 24/7 - study at a time and pace to suit the learner
- Created by subject matter and industry experts
- Kept up to date with training on the latest techniques and systems
- Can be used as a standalone solution or integrated as part of a blended learning programme
- Support a variety of digital apprenticeship standards
- Used by telecoms professionals worldwide
- Proven, effective training method with a long track record of success
- Provide value for money with measurable results

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Introduction to telecommunications

These courses are particularly useful for managers and non-technical staff who require an appreciation of the technological, regulatory and commercial aspects of telecoms.

Telephony and data services

Introduces the facilities and capabilities of telephony and data services provided by modern telecommunications systems with reference to the underlying infrastructure.

Code: TFA Level: Introductory

Wireless communications

Introduces the basic operation, capabilities and applications of wireless communications for those joining the telecoms sector in a managerial or technical role.

Code: WAA Level: Introductory

Telecoms infrastructure and administration

Introduces the underlying physical infrastructure of a telecommunications system and the commercial, standardisation and regulatory aspects of telecoms provision.

Code: TCC Level: Introductory

The following course is particularly useful for customer facing staff who need an appreciation of telecommunications without technical detail.

Introduction to telecoms services

Provides an overview of the facilities provided by modern fixed line and mobile telecommunications services.

Code: TCE Level: Introductory

Telecommunications fundamentals

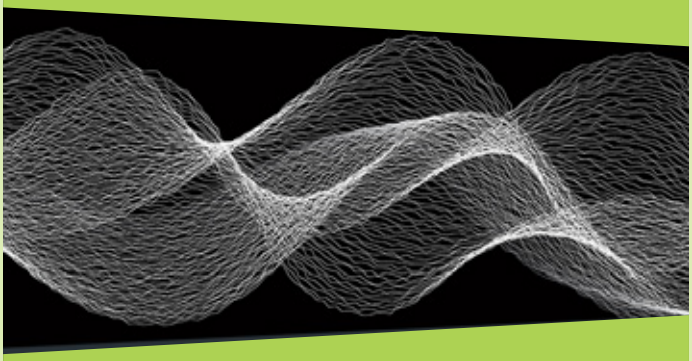
The following courses cover the fundamental principles of telecoms technology and are designed for technical staff especially those new to the telecoms sector.

Analogue and digital signals

An introduction to the characteristics of the signals used in communications systems and the effect of passive circuits and transmission lines on those signals.

Code: PAA Level: Introductory

Signal impairments



An introduction to the causes of signal impairments and their effect on the transmission of information over telecommunications and data links.

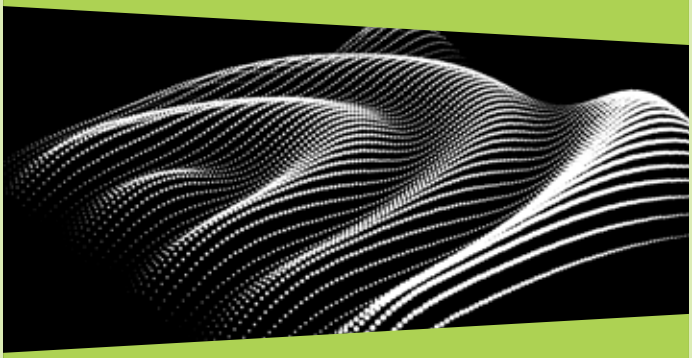
Code: PAB Level: Introductory

Transmission fundamentals

Describes the characteristics, capabilities and applications of copper, optical fibre and wireless transmission media.

Code: PAC Level: Introductory

Modulation and multiplexing



Introduces the methods employed in telecommunications systems to maximise the traffic carrying capacity of transmission media.

Code: PAD Level: Introductory

Data communications principles

Explains the fundamental principles of data communications and describes the role of the basic functional components of data links and the protocols that define their operation.

Code: PAE Level: Introductory

Telecommunications networks

Introduces the role, structure, capabilities and operation of modern telecommunications networks.

Code: PAG Level: Introductory

Media encoding

Introduces the digital processing that is carried out on speech and video before transmission over communications networks including those providing fixed line, mobile and Internet telephony.

Code: PAF Level: Introductory

Telecoms testing and fault-finding

Describes how to follow a structured approach to fault finding and maintenance, and the role and significance of the various tests employed on telecommunications networks and broadband connections.

Code: FPB Level: Intermediate

Telecommunications security

Telecoms companies are amongst those which are most vulnerable to cyber attacks and other threats. The PTT course below ensures telecoms employees are aware of such threats and helps them to guard against security breaches.

Telecommunications systems security

Provides an overview of the protection of personal data held by telecommunications providers against misuse and the protection of telecoms systems against intrusion and fraudulent misuse.

Code: TCG Level: Intermediate

Broadband access

Courses covering copper and optical fibre based technologies that provide broadband access to telecoms services and the Internet.

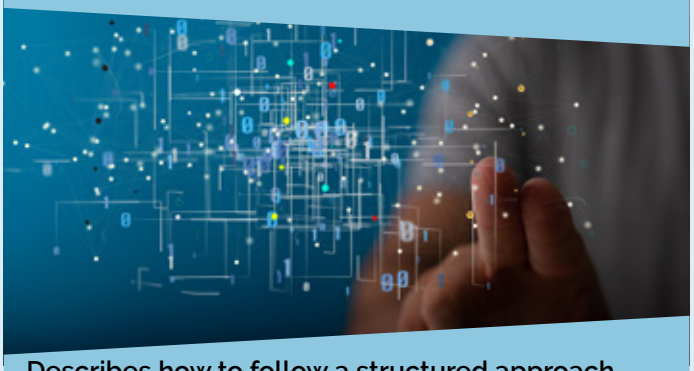
Introduction to the access network

Telecommunications access networks

Introduces the structure, components, applications and capabilities of the access networks that provide telephony and broadband services.

Code: FOA Level: Introductory

Telecoms testing and fault-finding

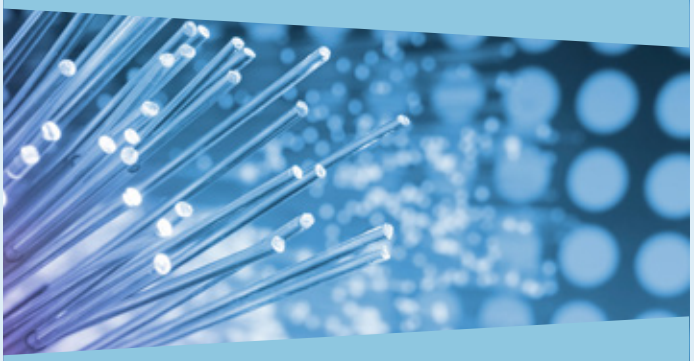


Describes how to follow a structured approach to fault finding and maintenance, and the role and significance of the various tests employed on telecommunications networks and broadband connections.

Code: FPB Level: Intermediate

Broadband technologies

Optical fibre principles



Introduces the principles of optical fibre transmission, describes the role of the components of a fibre link, and discusses the impairments that limit transmission distance and data transfer rate.

Code: OMA Level: Introductory

Optical fibre installation and testing

Describes the role and features of the components of optical access networks and the practical aspects of installing and testing the cable systems that provide fibre-based broadband services.

Code: FOC Level: Introductory

Next generation access networks

Describes the capabilities, components and operation of the copper and fibre access networks that meet the demand for high speed broadband now and in the future.

Code: TDD Level: Intermediate

Hybrid fibre coax systems

Describes the operation, components and capabilities of hybrid fibre coax cable systems with reference to the provision of television, video on demand and broadband services.

Code: TCF Level: Intermediate

Voice services

Courses covering the delivery of voice services.

Telephony and data services

Introduces the facilities and capabilities of telephony and data services provided by modern telecommunications systems with reference to the underlying infrastructure.

Code: TFA Level: Introductory

Introduction to telephony

This course introduces the principles of operation, components, structure, management, and provisioning of private and public telephony systems.

Code: VAA Level: Intermediate

Voice over IP

Describes the components, protocols and operation of telephony systems that operate over Internet Protocol (IP) networks with emphasis on the Session Initiation Protocol (SIP).

Code: VAB Level: Advanced

VoIP systems

Describes the functional components and operation of public telephony systems based on the Internet Protocol (IP) with emphasis on those employing an IP Multimedia Subsystem (IMS) in a next generation network.

Code: MED Level: Advanced

Hybrid fibre coax systems

Describes the operation, components and capabilities of hybrid fibre coax cable systems with reference to the provision of television, video on demand and broadband services.

Code: TCF Level: Intermediate

Computer networks

Courses covering the operation and security of computer networks.

Ethernet fundamentals

Provides an introduction to the underlying concepts of Ethernet Local Area Networks (LAN) and the capabilities, components and structure of Ethernet LANs.

Code: EDA Level: Intermediate

Structured cabling

Describes the structure, components, installation requirements and testing of cabling systems employed in local area networks.

Code: EBB Level: Introductory

Ethernet networks

Describes the operation of fixed line and wireless Ethernet networks with reference to their address schemes, protocols, functional elements and security methods.

Code: EDC Level: Intermediate

Advanced Ethernet networks

Describes the enhancement of the security of Ethernet local area networks (LANs), network management and testing tools, and the wide area network services that provide connections between remote LANs.

Code: EBD Level: Advanced

Network testing and fault-finding

Explains the benefits and methods of a structured approach to fault-finding and maintenance, and describes the role of the tests employed on Ethernet/IP networks and their use in fault finding and measuring network performance.

Code: EDE Level: Intermediate

Network services

Introduces the elements of computer networks and the associated software that provide services to network users and the measures taken to minimise the impact of disruptive events on service delivery.

Code: NSA Level: Intermediate

Domain and cloud services

Introduces the role, benefits of, and facilities provided by, the various domain and cloud services that underpin the provision of business applications.

Code: NSB Level: Advanced

Wide area networks

Courses covering the operation of the wide area networks that provide long distance communications for businesses and telecommunications providers.

Introduction to WANs

Introduces the principles of operation, capabilities and features of various types of Wide Area Network and describes the requirements of different types of traffic and how these can be met.

Code: TQA Level: Intermediate

Internet protocols

Explains the role, facilities and operation of the various protocols employed on the Internet and many other communications systems.

Code: TQF Level: Intermediate

IP networks

Describes how networks using the Internet protocol reliably deliver data to its intended destination.

Code: TQG Level: Intermediate

Interior IP routing

Describes in detail the role, facilities, and operation of the various protocols that discover routes within an IP network.

Code: TQH Level: Advanced

Exterior IP routing

Describes the role, facilities, and operation of the protocols that discover routes between IP networks and describes methods of increasing the efficiency and security of the routing process.

Code: TQJ Level: Advanced

Advanced IP networks

Describes the techniques such as RSVP, Diffserv and MPLS that are used to offer a differentiated quality of service over an IP network.

Code: TAH Level: Advanced

Advanced Ethernet networks

Describes the enhancement of the security of Ethernet local area networks (LANs), network management and testing tools, and the wide area network services that provide connections between remote LANs.

Code: EBD Level: Advanced

Optical transport networks

Provides an in-depth, impartial treatment of the operation and possible architectures of, and services delivered by the optical transport networks that provide high speed national communications connections.

Code: OAB Level: Advanced

Mobile and wireless networks and services

Courses covering the principles and operation of mobile and wireless networks.

Wireless communications

Introduces the basic operation, capabilities and applications of wireless communications for those joining the telecoms sector in a managerial or technical role.

Code: WAA Level: Introductory

Introduction to mobile systems

Introduces concepts which are used in most types of mobile systems, like handover and roaming, and traffic handling. Also reviews the generations from 2G to 5G comparing their performance, and operation, and network structure.

Code: MKA Level: Introductory

Mobile radio communications

Describes the operation of the radio access network of a mobile system with emphasis on radio communications to and from a mobile. MKA and MJB are designed as preparation for the more advanced mobile courses.

Code: MJB Level: Intermediate

4G and 5G radio access networks

This course describes the features, structure, and operation of LTE (4G) and 5G radio access networks and the techniques employed to maximise data transfer speeds and minimise latency over the air interface.

Code: MJC Level: Advanced

Advanced mobile systems

This course describes the role of the functional elements of the various generations of mobile system and describes mobility in, and the provision of services over, LTE (4G) and 5G mobile systems.

Code: MJD Level: Advanced

Optical transmission networks

Courses covering the principles and operation of optical networks.

Synchronous transmission principles

Introduces the principles of synchronous transmission techniques as employed in modern long-haul networks.

Code: SYA Level: Introductory

SDH principles

Introduces the fundamental principles of the Synchronous Digital Hierarchy (SDH) as employed in modern broadband networks.

Code: SYB Level: Intermediate

Optical line systems

Describes the capabilities, components and operation of the optical links that provide interconnections for telecommunications and cloud service providers.

Code: OAC Level: Intermediate

SDH networks

Describes the capabilities, components and operation of metropolitan and national networks that employ SDH-based optical links to provide the high capacity needed for modern communications.

Code: SZD Level: Advanced

Optical transport networks

Provides an in-depth, impartial treatment of the operation and possible architectures of, and services delivered by the optical transport networks that provide high speed national communications connections.

Code: OAB Level: Advanced

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Last updated: July 2025