



Diploma in Telecommunications

Telecommunications plays an indispensable role in modern life and its importance in our business and social lives is increasing.

PTT has developed a number of online courses that together provide an ideal study programme for those joining the telecommunications industry in a technical role. The Diploma in Telecommunications programme also forms a solid foundation for more advanced telecoms studies.

Study aim: To explore the fundamental principles, components, operation and facilities of modern telecommunications systems.

The study programme:

The Diploma in Telecommunications programme consists of seven online courses. The programme begins with the study of these five online courses:

SRA: Analogue and digital signals	SRB: Transmission fundamentals
SRC: Data communications principles	SRE: Media encoding and transmission
SRD: Telecoms networks and services	

The two online courses you then study depends on your specialisation. You can choose from one of three specialisations:

1. Data communications
2. Telephony
3. Mobile communications

Data communications courses:	Telephony courses:	Mobile communications courses:
TAA: Introduction to WANs	MDA: Voice switching	MBA: Introduction to mobile systems
TAF: IP networks	MEB: Voice over IP	MBB: The air interface

Online tutor support is also provided and online assessments throughout the study programme test understanding and provide feedback.

What you achieve:

A Diploma in Telecommunications from PTT which summarises what you have learned and your level of achievement.

What you need before beginning this programme:

Although not obligatory, the study of Physics or Additional Science at secondary (high) school level will aid your understanding of the principles covered in the Diploma study programme.

What you are provided with to obtain Your Diploma:

1. Study guide available online which summaries the topics covered by each course and gives guidance about studying the courses and attempting the assessments.
2. Licence to access seven online courses for a period of 12 months.
Once a course has been studied it can be revisited at any time for revision and reference during the 12 month licence period. Summaries of the topics covered by a course can be printed out for personal reference.
3. Online assessments: Each course consists of several modules each of which has an accompanying multiple choice online assessment. The assessments can be taken at any time in the 12 month licence period with a maximum of two attempts.
To achieve a Diploma, all of the modules for the seven courses must be attempted with a resulting final score of at least 50%.
4. Online access to your tutor who will answer any questions you may have about the topics covered within two working days.
5. Your personal online study area allows you to monitor your progress through the study programme, send messages to your tutor and access the study guide and courses.

Certificate study programme objectives:

By the end of the core component of the study programme, you will be able to:

- describe the characteristics and capabilities of the signals used in communications systems and the impairments that limit communications.
- describe the characteristics, capabilities and applications of copper, optical fibre and wireless transmission media and explain the techniques used to maximise the traffic carrying capacity of those media.
- describe the role of the basic functional components of data links and the protocols that define their operation.
- describe the digital processing that is carried out on speech and video before transmission.
- describe how speech is transmitted over traditional telephone networks and compare to its transmission over IP networks such as the Internet.
- describe the role, structure and capabilities of modern telecommunications networks.
- describe the regulatory and commercial aspects of telecommunications service provision,
- describe the facilities of telecommunication services offered to residential and business customers.

By the end of the specialisation "Data communications" component you will be able to:

- describe the principles of operation, capabilities and features of various types of Wide Area Network
- describe the requirements of different types of traffic and explain how their specific requirements can be met.
- describe the features, facilities, structure and basic operation of networks using the Internet suite of protocols.
- describe the structure and operation of the Internet and explain the role of the various organisations involved in its administration and operation.

By the end of the specialisation "Telephony" component you will be able to:

- explain the principles and operation of circuit switched telephony as used in the Public Switched Telephone Network (PSTN).
- explain the underlying concepts and significance of the telephony service parameters "grade of service", "availability", "post-dial delay".
- explain the principles and operation of telephony services that operate over Internet Protocol (IP) networks with reference to the basic system components and VoIP signalling protocols SIP and H.323.
- Describe the factors that affect the service parameters of a VoIP system.

By the end of the specialisation "Mobile communications" component you will be able to:

- explain the concepts which are used in most types of mobile systems, including handover and roaming, and cellular traffic handling.
- describe and compare the capabilities of the various generations and types of mobile system.
- describe the communications between a mobile user's equipment and the fixed infrastructure provided by the mobile operator.

web: www.ptt.co.uk

email: info@ptt.co.uk

tel: 0845 0949 120

International tel: +44 1736 759642