

# City & Guilds Level 3 Diploma in Telecommunication Systems

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## List of Modules

1. Advanced Mathematics
2. Fundamentals of Electronic Communication 2
3. Communication Systems and Digital Networks 2
4. Fundamentals of Electronic Communication 3
5. Communication Systems and Digital Networks 3
6. Radio Systems
7. Communication Systems and Digital Networks 2 – Practical
8. Communication Systems and Digital Networks 3 - Practical

# Advanced Mathematics

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**Module Code** : 307

## **Topics**

1. Linear equations and transposition
2. Quadratic functions
3. Linear law fitting
4. Graphs
5. Complex numbers
6. Trigonometry
7. Calculus

# Fundamentals of Electronic Communication 2

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**Module Code : 301**

## **Topics**

1. Boolean algebra, combinational logic gates and relaxation oscillators
2. Terminology and requirements of simple telecommunication networks
3. The nature, sources and effects of noise on telecommunications and the use of decibels as the unit of measurement
4. Characteristics of transmission lines and cables used for telecommunication
5. Effects of capacitors and inductors in filters and oscillators
6. Principles of communicating information by varying the characteristics of high frequency waveform

# Communication Systems and Digital Networks 2

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**Module Code : 302**

## **Topics**

1. Data communication fundamentals
2. The open systems interconnection (OSI) reference model
3. Transmission control protocol / internet protocol (TCP/IP)
4. Data packets, frames and cells
5. Switching and routing

# Fundamentals of Electronic Communication 3

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**Module Code : 303**

## **Topics**

1. Power supply systems
2. Optical fiber systems
3. Modulation and modems
4. Digital transmission and multiplexing
5. Pulse modulation and time division multiplexing (TDM)
6. Access network and digital telephone exchanges

# Communication Systems and Digital Networks 3

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**Module Code : 304**

## **Topics**

1. Structured cabling
2. Local area networks (LANs), metropolitan area networks (mans) and wide area networks (wans)
3. Transmission systems
4. End systems
5. Network management
6. Internet data center (IDC)

# Radio Systems

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**Module Code : 305**

## **Topics**

1. Fundamentals of electromagnetic radiation
2. Antennas and feeder systems
3. Terrestrial radio propagation
4. Radio transmitters
5. Radio receivers
6. Mobile telecommunications systems
7. Satellite communication

Full Syllabus Document can be downloaded from below web link

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