Liverpool John Moores University

Title:	INTRODUCTION TO TELECOMMUNICATIONS
Status:	Definitive
Code:	**5024TECH** (105428)
Version Start Date:	01-08-2016
Owning School/Faculty:	Electronics and Electrical Engineering
Teaching School/Faculty:	Electronics and Electrical Engineering

Team	Leader
Princy Johnson	Y

Academic Level:	FHEQ5	**Credit Value:**	12	**Total Delivered Hours:**	38
Total Learning Hours:	120	**Private Study:**	82		

Delivery Options
Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	24
Seminar	12

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1	Examination	50	2
Essay	AS2	Coursework	50	

Aims

To study the principles behind modern telecommunications systems, covering aspects such as carrier systems for analogue and digital systems, baseband coding and multiplexing.

Learning Outcomes

After completing the module the student should be able to:

1 Code and decode line coding schemes used in telecommunications
2 Sketch various modulated signals and their spectra
3 Design a variable length code
4 Describe telephone and fibre optic transmission systems

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

EXAM	1	2	3	4
CW	1	2		

Outline Syllabus

AM&FM/Waveforms/Spectra
PCM/Line Codes
Digital Modulation: ASK/PSK/DPSK/FSK
Variable Length Coding
Space/Ground/Sky waves – Broadcast Signals
Fibre Optic Transmission
The telephone
Basic Networking

Learning Activities

A series of lectures and practical sessions

Notes

This module covers the basic principles of communication systems and their properties, and the signals they handle.