

Liverpool John Moores University

Title: Telecommunications Systems
Status: Definitive
Code: **7015ELE** (120436)
Version Start Date: 01-08-2016

Owning School/Faculty: Electronics and Electrical Engineering
Teaching School/Faculty: Electronics and Electrical Engineering

Team	Leader
Ronan McMahon	Y

Academic Level: FHEQ7 **Credit Value:** 10 **Total Delivered Hours:** 38
Total Learning Hours: 100 **Private Study:** 62

Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	12
Practical	12
Tutorial	12

Grading Basis: 50 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	Exam		60	2
Report	Report		20	
Presentation	Present		20	

Aims

To develop an extensive knowledge of telecommunications systems and the relationship between network design decisions and end user application performance.

Learning Outcomes

After completing the module the student should be able to:

- 1 Model and evaluate network and application scenarios
- 2 Analyse and critique network infrastructure and architecture proposals
- 3 Discuss the relationships between application performance and the underlying network

Learning Outcomes of Assessments

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

Exam	2	3
Report	1	
Presentation	1	

Outline Syllabus

End-User applications

*Performance and Quality of Service (QoS) - measurements and indicators;
Bandwidth, Delay, Errors;*

Network Architectures – Structured, Unstructured; node and functionality distribution

Multiple Access

Network Management

Case Study (e.g. 3G/4G/WiMAX)

Traffic – User, Control, Management

Capacity

Access nodes, links and Traffic

Core nodes, links and Traffic

Learning Activities

A series of lectures, tutorials and labs.

Notes

This module provides the student with extensive knowledge of the elements used in a variety of telecommunications systems. It will include discussions on relevant functionality, relationships and interdependencies.