

Liverpool John Moores University

Title: Networks and Protocols
Status: Definitive
Code: **7016ELE** (120437)
Version Start Date: 01-08-2018

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 2

Component	Contact Hours
Lecture	12
Practical	12
Tutorial	12

Grading Basis: 50 %

Assessment Details

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

Aims

To develop an extensive knowledge of network architectures and the protocols used therein

Learning Outcomes

After completing the module the student should be able to:

- 1 Propose a solution in response to a set of requirements
- 2 Critically evaluate computer network architectures and protocols
- 3 Analyse and critique requirements in relation to networking scenarios.

Learning Outcomes of Assessments

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

Exam	2	3
Report	1	
Presentation	1	

Outline Syllabus

Introduction: applications of networks, protocols and layering, network architectures, layer models, private and public networks, circuit and packet switching.

Physical and data link layers; protocols and functionality, Medium Access Control (MAC), Local Area Networking, Ethernet.

Wide Area Network and Access Networks – e.g. ADSL, SDH

Internet – Internet architecture, IP, UDP, TCP, Routing, Internet application layers,

User applications: Performance requirements – throughput, delay and errors

QoS (DiffServ, IntServ, MPLS), comparison with 'Best-Effort'

Network Management

Security

Learning Activities

A series of lectures, tutorials and practicals

Notes

This module provides the student with an extensive knowledge of the concepts of network protocols and the environments in which they operate.