

Liverpool John Moores University

Title: ADVANCED NETWORKS
Status: Definitive
Code: **6024TECH** (105442)
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: FHEQ6 **Credit Value:** 12 **Total Delivered Hours:** 38
Total Learning Hours: 120 **Private Study:** 82

Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	24
Practical	12

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1	Examination	60	2
Essay	AS2	Coursework 1	20	
Essay	AS3	Coursework 2	20	

Aims

This level 3 module builds on level 2 material to provide an appreciation of modern high speed networks.

Learning Outcomes

After completing the module the student should be able to:

- 1 Explain how high speed networking components function
- 2 Explain network routing methodologies and strategies
- 3 Evaluate network security and specify appropriate systems.
- 4 Design a computer network.
- 5 Evaluate network performance

Learning Outcomes of Assessments

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

EXAM	1	2	3	4	5
CW	4				
CW	5				

Outline Syllabus

Communications Protocols. Review of OSI 7-layer and Internet reference models
High speed networks: LANs and WANs
Wireless networks: IEEE 802.11, 802.16,
IP, TCP and UDP.
IP Routing and MPLS
Network applications: DNS, DHCP, VPN, etc.
Network design, Test and Integration
Network Management and traffic
Network Security

Learning Activities

By a series of lectures, labs, and tutorials.

Notes

This level 3 module covers the areas of high-speed networking.