

## Liverpool John Moores University

Title: NETWORKS & INFORMATION SYSTEMS

Status: Definitive

Code: **6507TECYPC** (115873)

Version Start Date: 01-08-2018

Owning School/Faculty: Engineering

Teaching School/Faculty: YPC International College (Kolej Antarabangsa YPC)

Team	Leader
Paul Otterson	Y

**Academic Level:** FHEQ6      **Credit Value:** 24      **Total Delivered Hours:** 74

**Total Learning Hours:** 240      **Private Study:** 166

### Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	48
Practical	24

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1	exam	75	2
Report	AS2	Coursework	25	

### Aims

*This level 3 module builds on level 2 material to provide an appreciation of modern software systems, their configuration, high speed, optical and wireless networks.*

### Learning Outcomes

After completing the module the student should be able to:

- 1 Explain how high speed networking components function
- 2 Install and test an operating system in a networking environment
- 3 Explain network routing methodologies and strategies
- 4 Implement network security and authorisation systems
- 5 Evaluate concepts behind wireless networking and apply them to industry and in the home

## Learning Outcomes of Assessments

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

Exam	1	3	4	5
Report	2	3	5	

## Outline Syllabus

*High speed communications networks: Gigabit Ethernet, FDDI, ATM, Frame relay, SDH*

*Broadband connections: xDSL, BISDN*

*IP protocol suite*

*Routing: routing strategies, routing protocols*

*Wireless networks: IEEE 802.11 family, Bluetooth*

*Network security – the use of firewalls, encryption and digital certificates.*

*Introduction to third generation mobile phone systems.*

*Operating System installation for a network.*

*Management of users, resources and security.*

*Distributed systems and information organisation.*

*Application performance within networks.*

## Learning Activities

By a series of lectures and practical demonstrations

<b>Course Material</b>	Book
<b>Author</b>	Stallings W.
<b>Publishing Year</b>	2005
<b>Title</b>	Operating Systems Internals and Design
<b>Subtitle</b>	
<b>Edition</b>	5th ed
<b>Publisher</b>	Pearson
<b>ISBN</b>	0-13-127837-1

<b>Course Material</b>	Book
<b>Author</b>	Stallings W.
<b>Publishing Year</b>	2000
<b>Title</b>	Data & Computer Communication

<b>Subtitle</b>	
<b>Edition</b>	6th ed
<b>Publisher</b>	Prentice-Hall
<b>ISBN</b>	0-13-084370-9

<b>Course Material</b>	Book
<b>Author</b>	Tanenbaum A.S.
<b>Publishing Year</b>	2005
<b>Title</b>	Computer Networks
<b>Subtitle</b>	
<b>Edition</b>	4th ed
<b>Publisher</b>	PH PTR
<b>ISBN</b>	0-13-038488-7

<b>Course Material</b>	Book
<b>Author</b>	Leinwand, A. and Conroy, K.F.
<b>Publishing Year</b>	2001
<b>Title</b>	Network Management
<b>Subtitle</b>	
<b>Edition</b>	2nd ed
<b>Publisher</b>	Addison Wesley
<b>ISBN</b>	0-201-60999-1

<b>Course Material</b>	Book
<b>Author</b>	Lewis,B. and Davis, P.T.
<b>Publishing Year</b>	2004
<b>Title</b>	Wireless Networks for Dummies
<b>Subtitle</b>	
<b>Edition</b>	
<b>Publisher</b>	Wiley
<b>ISBN</b>	0-7645-7525-2

<b>Course Material</b>	Book
<b>Author</b>	Stallings, W.
<b>Publishing Year</b>	2000
<b>Title</b>	Network Security Essential
<b>Subtitle</b>	
<b>Edition</b>	
<b>Publisher</b>	Prentice Hall
<b>ISBN</b>	0-13-016093-8

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## Notes

This level 3 module covers the areas of operating systems configuration in a networking environment, high-speed networking and wireless networks