

Liverpool John Moores University

Title: DATA COMMUNICATIONS AND COMPUTER NETWORKS
Status: Definitive
Code: **5033COMP** (103074)
Version Start Date: 01-08-2011

Owning School/Faculty: Computing and Mathematical Sciences
Teaching School/Faculty: Computing and Mathematical Sciences

Team	Leader
Robert Askwith	Y

Academic Level: FHEQ5
Credit Value: 12.00
Total Delivered Hours: 36.00
Total Learning Hours: 120
Private Study: 84

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	12.000
Practical	12.000
Tutorial	12.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	A theoretical/practical case study.	100.0	

Aims

To provide the student with an understanding of modern computer network techniques, technologies and their applications.

To provide students with the necessary skills and experience to set-up, configure, administer, and optimize a Local Area Network.

Learning Outcomes

After completing the module the student should be able to:

- 1 Identify and describe the functions of each of the seven layers of the OSI reference model and how standard protocols and networking types fit into this model.
- 2 Plan and design a network that meets the requirements of a business case study.
- 3 Evaluate the differences between the structure and needs of local area and wide area networks.
- 4 Identify and provide an effective solution to network security issues that are related to a private intranet and the Internet.

Learning Outcomes of Assessments

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

Case study 1 2 3 4

Outline Syllabus

*Standards and the OSI architecture, Protocol Models
TCP/IP and the Internet - Architecture, Protocols and future changes.
Data Communications.
Internetworking: Bridges, Gateways, Routing
Local Area Networks (LANs): Ethernet, Switched Ethernet, 802 Standards series,
Network management and Security*

Learning Activities

Lectures are supported by tutorial exercises and practical laboratory sessions.

References

Course Material	Book
Author	Kurose, J.F.
Publishing Year	2007
Title	Computer Networks
Subtitle	
Edition	4th
Publisher	Addison Wesley
ISBN	0321497708

Course Material	Book
Author	Tannebaum, A.S.
Publishing Year	2003
Title	Computer Networks
Subtitle	

Edition	4th Edition
Publisher	Prentice Hall
ISBN	0310661023

Notes

Computer networks are part of every computer installation. This course studies the architectures, protocols and applications of computer networks. In addition to the theory students get a practical view of networks.