Liverpool John Moores University

Title:	DISTRIBUTED SYSTEMS
Status:	Definitive
Code:	**6035COMP** (103080)
Version Start Date:	01-08-2011
Owning School/Faculty:	Computing and Mathematical Sciences
Teaching School/Faculty:	Computing and Mathematical Sciences

Team	Leader
Denis Reilly	Y

Academic Level:	FHEQ6	**Credit Value:**	12.00	**Total Delivered Hours:**	38.00
Total Learning Hours:	120	**Private Study:**	82		

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
Practice	AS1	A practical application	25.0	
Exam	AS2	Examination	75.0	2.00

Aims

To develop an understanding of the theory and practice of building distributed systems.

Learning Outcomes

After completing the module the student should be able to:

1 Explain the structure of parallel and distributed architectures.
2 Explain principles of concurrency.
3 Apply the approaches used to build distributed solutions.
4 Analyse and evaluate the provision of distributed services and their impact on distributed systems design.

Learning Outcomes of Assessments

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

Practical	3	4	
Exam	1	2	4

Outline Syllabus

Resume of parallel and distributed architectures.
Fundamentals of concurrency.
Shared memory systems.
Message passing systems.
Architectural models (client-server, peer-to-peer).
Middleware: RPC, RMI, Corba
Java RMI case study.
Operating system support.
Distributed file systems (NFS).
Distributes multimedia systems.

Learning Activities

Practical laboratory exercises, supporting the lectures and tutorials.

References

Course Material	Book
Author	Colouris,G.F. Dollimore,J. Kindberg,T.
Publishing Year	2005
Title	Distributed Systems: Concepts & Design
Subtitle	
Edition	4th
Publisher	Addison Wesley
ISBN	0321263545

Course Material	Book
Author	Liu, M.
Publishing Year	2003

Title	Distributed Computing: Principles and Applications
Subtitle	
Edition	
Publisher	Addison-Wesley
ISBN	0201796449

Course Material	Book
Author	http://java.sun.com/docs/books/tutorial/rmi
Publishing Year	0
Title	
Subtitle	
Edition	
Publisher	
ISBN	

Course Material	Book
Author	Tannenbaum, A. and Van Steen, M.
Publishing Year	2003
Title	Distributed Systems: Principles and Paradigms
Subtitle	
Edition	
Publisher	Prentice Hall
ISBN	0131217860

Notes

Most organizational structures are distributed over local and wide areas. The information infrastructure builds on computer networks to achieve distribution. This course investigates the architectures, concepts and techniques for building distributed computer systems to support these organizational structures. A number of modern and representative case studies are studied. Practical implementations are also undertaken during the course.