Liverpool John Moores University

Title:	DISTRIBUTED SYSTEMS
Status:	Definitive
Code:	**5115COMP** (121237)
Version Start Date:	01-08-2021
Owning School/Faculty:	Computer Science and Mathematics
Teaching School/Faculty:	Computer Science and Mathematics

Team	Leader
Denis Reilly	Y
Rubem Pereira	

Academic Level:	FHEQ5	**Credit Value:**	20	**Total Delivered Hours:**	55
Total Learning Hours:	200	**Private Study:**	145		

Delivery Options
Course typically offered: Semester 2

Component	Contact Hours
Lecture	22
Practical	10
Seminar	10
Tutorial	11

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Students design a DS based on a given application scenario	50	
Exam	AS2	Exam	50	2

Aims

To assess a variety of principles, tools and techniques used for the design of distributed computer systems.

To evaluate the effect of distribution, benefits and problems, on the design and implementation of computer based solutions, and to design distributed systems using appropriate tools and techniques.

Learning Outcomes

After completing the module the student should be able to:

1	Analyse the requirements of a distributed system and the suitability of existing distributed systems paradigms
2	Apply knowledge of distributed systems and middleware
3	Identify appropriate tools and techniques for the design of a distributed system
4	Evaluate distributed systems, and related tools and techniques

Learning Outcomes of Assessments

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

Design of a distributed system	2	3
Exam	1	4

Outline Syllabus

Distributed Systems Concepts and Architectures – Models and Paradigms
Networked applications and Middleware
Message passing, Remote Procedure Calling
Distributed Objects and Remote Method Invocation
Distributed File Systems
Naming
Synchronisation
Replication
Fault Tolerance

Learning Activities

Students will participate in lectures, tutorials, seminar/group work, and practical/lab sessions.

Notes

The distributed paradigm is analysed, including architectures, models, middleware and applications. The most salient concepts are analysed and suitable tools and techniques evaluated against specific requirements.