

Liverpool John Moores University

Title: Knowledge Based Systems
Status: Definitive
Code: **5222COMP** (127997)
Version Start Date: 01-08-2021

Owning School/Faculty: Computer Science and Mathematics
Teaching School/Faculty: Computer Science and Mathematics

Team	Leader
Martin Randles	Y
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Academic Level: FHEQ5 **Credit Value:** 20 **Total Delivered Hours:** 44
Total Learning Hours: 200 **Private Study:** 156

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	22
Practical	22

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Formulation and evaluation of Knowledge Based System Techniques	40	
Technology	AS2	Knowledge Based System Development	60	

Aims

To provide knowledge, understanding and experience on the development process, tools and techniques for producing knowledge-based and 'intelligent' systems.

Learning Outcomes

After completing the module the student should be able to:

- 1 Apply knowledge of knowledge-based and multi-agent systems
- 2 Effectively communicate techniques used to facilitate Knowledge Based Systems
- 3 Evaluate methods of knowledge acquisition and processing for application to a real-world problem
- 4 Apply knowledge-based system techniques to construct a moderately sized intelligent system given a set of requirements

Learning Outcomes of Assessments

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

Report	1	2
Technology	3	4

Outline Syllabus

Knowledge Based Systems Architecture
Development of Knowledge Based Systems
Knowledge Management
Logic and Reasoning
Epistemic Logic
Agents
Agent Knowledge Based Systems Components
Multi-Agent Systems
Uncertain Reasoning
Modal Logics
Agent Planning
Systems' Simulation

Learning Activities

Lectures are aimed at providing students with fundamental concepts on knowledge-based systems, whereas practical tutorial exercises will prepare the students for putting knowledge gained into practice.

Notes

This module introduces the theory, methods, techniques and tools involved in the development of knowledge-based systems and intelligent systems.