

Liverpool John Moores University

Title: CLOUD COMPUTING
Status: Definitive
Code: **6130COMP** (121307)
Version Start Date: 01-08-2021

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

Team	Leader
Andrew Attwood	Y

Academic Level: FHEQ6
Credit Value: 20
Total Delivered Hours: 57
Total Learning Hours: 200
Private Study: 143

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	22
Practical	22
Seminar	11

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1	Examination	50	2
Report	AS2	Implementation of a hardened cloud application coupled with an individual report based on a given specification	50	

Aims

To allow students to develop new advanced cloud-based software development skills and to combine their existing and new skills in a practical context.

Learning Outcomes

After completing the module the student should be able to:

- 1 Critically analyse the principles that underpin cloud computing
- 2 Recognise the distributed systems foundations of cloud computing and big data platforms
- 3 Evaluate the most up to date commercial platforms for use in building cloud computing applications
- 4 Critically review common software architectural styles to build cloud applications
- 5 Select appropriate distributed version control to manage applications development
- 6 Evaluate the challenges involved in developing large scale applications with cloud computing

Learning Outcomes of Assessments

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

Exam	1	2	3	
Report based on specification	3	4	5	6

Outline Syllabus

- *Cloud computing and it's enabling technologies – data centres, virtualisation, software defined architectre*
- *Cloud service programming with HTTP and RESTful APIs.*
- *Big data tools and programming paradigm with MapReduce and NoSQL databases*
- *Big streaming data analytics with Apache storm*
- *Distributed version control for application development with an focus on git*
- *Load balancing strategies that are used for large scale applications.*
- *Publish/subscribe systems for large scale information dissemination.*

Learning Activities

The module will provide both lecture and practical elements. Seminar work will build on existing knowledge of distributed systems, recapping and refocussing on its application to building large scale cloud applications. The practical element will involve hands-on cloud application development using real-world cloud services. Assessment will include a practical element that will also contribute as a learning activity.

Notes

A practical module with an emphasis on software development for cloud computing