

Liverpool John Moores University

Title: Big Data Analytics
Status: Definitive
Code: **6173CSD** (125577)
Version Start Date: 01-08-2021

Owning School/Faculty: Engineering
Teaching School/Faculty: Engineering

Team	Leader
Michael Shaw	Y

Academic Level: FHEQ6
Credit Value: 20
Total Delivered Hours: 36
Total Learning Hours: 200
Private Study: 164

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	16
Practical	12
Tutorial	8

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	ASS 1	2,500 word report	70	
Technology	ASS 2	2,000 word lab report	30	

Aims

To develop an understanding of the concepts, principles and techniques involved in Big Data analytics, and how this can be used to control smart systems.

Learning Outcomes

After completing the module the student should be able to:

- 1 Critically appraise the concepts, principles, opportunities and issues surrounding Big Data.
- 2 Evaluate and apply high level skills of data analytic techniques in the context of Big Data.
- 3 Analyse computer-based models for solving complex problems through big data analytics to control smart systems.

Learning Outcomes of Assessments

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

Report	1	2	3
Lab	1	2	3

Outline Syllabus

*Big Data Analytics: principles and techniques, issues and opportunities, statistical algorithms and community clustering principles, issues affecting security and privacy. Modelling tools and simulation techniques to explore limitations and issues with data analytics techniques.
Application/case study.*

Learning Activities

A series of structured lectures, tutorials and practical tasks will provide a varied range of learning activities.

Notes

This module looks at the technologies used to 'mine' data and examines big data sets to uncover and highlight previously hidden and unexpected patterns and correlations to improve and inform the decision-making process. Techniques at linking big data analytics to control smart systems is explored.