

Big Data Systems and Analytics

Module Code:	COS7006-B
Academic Year:	2018-19
Credit Rating:	20
School:	Department of Computer Science
Subject Area:	Computer Science
FHEQ Level:	FHEQ Level 7 (Masters)

Pre-requisites:

Co-requisites:

Contact Hours

Type	Hours
Lectures	24
Tutorials	6
Laboratory	24
Directed Study	146

Availability Periods

Occurrence	Location/Period
BDA	University of Bradford / Semester 1 (Sep - Jan)

Module Aims

To enable you to gain advanced knowledge and develop skills on big data topics, concerning architectures of big data systems, management of big data projects, and computational approaches for big data analytics. To equip and enhance the understanding and application of intellectual property, and legal and ethical issues within the general context of digital economy and big data.

Outline Syllabus

1. Introduction to a variety of Systems Architectures for big data, study of different architectures and the associated functions.

2. The design of big data systems to enable the effective analytics of big data.
3. Study of a variety of approaches for big data analytics.
4. Study of a variety of cases on big data product design and innovation.
5. Study of a variety of applications of big data analytics in different domains.
6. Introduction to intellectual property, legal and ethical issues applied to big data resources.

Module Learning Outcomes

On successful completion of this module, students will be able to...

- 1 Evaluate the design of system architectures and data analytics approaches for big data projects.
- 2
 - a) Design and implement suitable architectures for organizing and analyzing big data.
 - b) Discuss contemporary issues in big data project management including intellectual property, legal and ethical aspects.
 - c) Apply skills and techniques for problem solving in big data analytics.
- 3 Demonstrate effective communication, team work, self-management and problem solving skills.

Learning, Teaching and Assessment Strategy

A series of lectures will provide the essential theories and concepts. Laboratory sessions will provide you with opportunities to implement the systems architecture and test the difference of performance. Tutorials will facilitate identification and discussion of relevant case studies and will be organized for you to discuss and present your understanding of the selected topics. Oral feedback is given during the practical classes as appropriate. Module assessment consists of two coursework components - one for group work and another one for individual work. The assessment is to test skills, knowledge and understanding for solving relevant practical problems on big data systems. The supplementary assessment follows the coursework format to address deficiencies encountered at the first attempt.

Mode of Assessment

Type	Method	Description	Length	Weighting	Final Assess'
Summative	Coursework	Coursework 2 (Individual): Exercises on data analytics.	0-2000 words	50%	Yes
Referral	Coursework	Supplementary coursework assessment (Individual)	0-4000 words	100%	No

Summative	Coursework	Coursework 1 (Group): Exercises on the design of system architectures.	0-2000 words	50%	No
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Legacy Code (if applicable)

CM-0438D

Reading List

To view Reading List, please go to [rebus:list](#).