



MODULE SPECIFICATION

Part 1: Information			
Module Title	Big Data Analytics		
Module Code	UFCFJP-15-3	Level	Level 6
For implementation from	2018-19		
UWE Credit Rating	15	ECTS Credit Rating	7.5
Faculty	Faculty of Environment & Technology	Field	Computer Science and Creative Technologies
Department	FET Dept of Computer Sci & Creative Tech		
Contributes towards	Information Technology [Sep][FT][Frenchay][1yr] BSc (Hons) 2018-19		
Module type:	Standard		
Pre-requisites	None		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description
<p>Overview: This module will provide you with an insight into concepts, theories and developments associated with data analytics and big data. You will be introduced to knowledge discovery, analysis and assessment of data extracted from structured and unstructured big data sets, visualisation and communication of results. You will develop practical skills through using tools and techniques from the forefront of the emerging field of data analytics and big data.</p> <p>Educational Aims: See Learning Outcomes</p> <p>Outline Syllabus: Indicative content:</p> <p>Introduction to Big Data:</p> <p>Defining Big Data</p> <p>Big Data and Data Warehousing</p>

STUDENT AND ACADEMIC SERVICES

Storing Big Data:

Analysing Data Characteristics

Overview of Big Data Stores

Selecting Big Data Store

Processing Big Data:

Integrating Disparate Data Stores

Employing Hadoop MapReduce

Tools and Techniques to Analyse Big Data:

Creating business value from extracted data

Recognizing Patterns and Trends with queries

Creating business value from extracted data

Ethical, privacy and security issues with respect to big data

Teaching and Learning Methods: The module is delivered through weekly lectures and lab sessions. Each lecture will direct the course and introduce the new ideas and skills required. Then small group lab sessions will enable each student to carry out the practical exercises described in the associated worksheet under the guidance of a Lab Tutor.

Scheduled learning includes lectures, tutorials and practical lab classes.

Independent learning includes time engaged with essential reading and assignment preparation and completion.

Part 3: Assessment

Module assessment will be divided into:-

Component A – 2 hour exam that is summative and assesses students' understanding of concepts of big data and data analytics, the security, privacy and ethical implications of using big data technologies as well as comparing the different frameworks available to implement big data solutions.

Component B – An individual project involving the investigation of a problem area and the development of a potential solution. Contextual evidence and/or sample datasets will be provided as guidance. The deliverables will consist of (i) a report (which will detail the research into their given topics, the techniques used to develop the proposed solution and an analysis of the results obtained) and (ii) the artefact developed to demonstrate the proposed solution.

There will be opportunities for formative assessment in the form of regular in-class presentations of research/implementation completed as part of tutorial work completed and subsequent group discussions.

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First Sit Components	Final Assessment	Element weighting	Description
Portfolio - Component B		75 %	Individual assignment: report (1500 words) and artefact
Examination - Component A	✓	25 %	Written Exam
Resit Components	Final Assessment	Element weighting	Description
Portfolio - Component B		75 %	Individual assignment: report (1500 words) and artefact
Examination - Component A	✓	25 %	Written Exam

Part 4: Teaching and Learning Methods		
Learning Outcomes	On successful completion of this module students will be able to:	
	Module Learning Outcomes	
	MO1	Define what Big Data is in general outline and explain those aspects that are important in any Big Data Solution
	MO2	Compare and contrast the different frameworks that provide tools for performing Big Data tasks and be able to determine the best solution for a given business scenario
	MO3	Demonstrate the ability to define a set of requirements for an ideal Big Data Solution given real-world business scenario
	MO4	Construct a design, implement and evaluate a working Big Data Solution based on a given set of requirements
	MO5	Describe security and privacy issues and other ethical considerations with respect to Big Data
Contact Hours	Contact Hours	
	Independent Study Hours:	
	Independent study/self-guided study	114
	Total Independent Study Hours:	114
	Scheduled Learning and Teaching Hours:	
	Face-to-face learning	36
	Total Scheduled Learning and Teaching Hours:	36
	Hours to be allocated	150
	Allocated Hours	150
Reading List	<p>The reading list for this module can be accessed via the following link:</p> <p>https://uwe.rl.talis.com/modules/ufcfjp-15-3.html</p>	