STUDENT AND ACADEMIC SERVICES

MODULE SPECIFICATION

Part 1: Information			
Module Title	Business Intelligence and Data Mining		
Module Code	UFCFMM-30-3	Level	Level 6
For implementation from	2021-22		
UWE Credit Rating	30	ECTS Credit Rating	15
Faculty	Faculty of Environment & Technology	Field	Computer Science and Creative Technologies
Department	FET Dept of Computer Sci & Creative Tech		
Module Type:	Standard		
Pre-requisites	None		
Excluded Combinations	None		
Co-requisites	None		
Module Entry Requirements	None		
PSRB Requirements	None		

Part 2: Description
Overview: Business Intelligence and Data Mining introduces students to the core concepts of data mining and machine learning in the context of business intelligence and leads them through an independent exploration of a typical machine learning project. **Educational Aims:** This module provides students with practical and applied knowledge of how to conduct data mining activities for business purposes. This includes key concepts in data mining as well as the statistical and modelling techniques necessary to analyse large data sets to generate meaningful business intelligence. The aims of the module are as follows: Appreciating the value of data mining and business intelligence in solving real-world problems. Understanding the foundation concepts of data mining and business intelligence. Exploring algorithms commonly used in data mining tools. Ability to apply data mining and business intelligence tools to real-world problems. Understanding of ethics, privacy considerations and security of data.

This module involves 3 hours contact time per week for two semesters with one hour for lecture and two hours for tutorial sessions.

Scheduled Learning and Teaching Study Hours: 72
Independent Study Hours: 228
Allocated Hours: 300

Outline Syllabus: Concepts of Data Mining and Business Intelligence.

Introduction to Machine Learning.

Data Mining Techniques.

Applications of Data Mining.

Knowledge-based Information Retrieval.

Ethical use of data and analytics.

Security aspects of data.

Teaching and Learning Methods: The module is delivered through weekly combined lecture and tutorial sessions. Each session will direct the course and introduce the new ideas and skills required. Then tutorial sessions will enable each student to carry out the study and research exercises described in the associated worksheet under the guidance of a Tutor.

The teaching material will be made available from Blackboard. A course text is also recommended. Scheduled learning includes lectures and tutorials.

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

Part 3: Assessment

The assessment strategy for this module consists of two parts.

Component A – This component focuses on researching a business intelligence case study. It consists of an individual poster presentation describing the case study. Students will investigate an example of where business intelligence/analytics was applied successfully and present a visualisation of the context, problem, solution and methodology used (40%).

Component B – In this component students will apply the learning from the research done in Component A to apply business intelligence techniques to a sample data set. This will be a group project involving the investigation of a problem area and the development of a potential solution. Groups (3 or 4 students) will be presented with contextual evidence and/or sample datasets. Groups will maintain a log book (3000 words) chronicling their journey from data exploration to evaluation and final conclusion. Peer assessment will be considered when deciding individual marks. The final mark will be based on the quality of the log book, presentation and the peer-assessed individual contribution and will constitute 60% of the overall module mark.

For referral Component A will be the same as the main sit. For Component B, the approach will be similar to the main sit, with the volume of the work appropriately scaled down as an individual piece of work. The log book for the referral will be 2000 words.

First Sit Components	Final Assessment	Element weighting	Description
Poster - Component A		40 %	Individual Poster Presentation 15 mins

Portfolio - Component B	✓	60 %	Group coursework (max 3000 words) and a 15-min presentation.
Resit Components	**Final Assessment**	**Element weighting**	**Description**
Poster - Component A		40 %	Individual poster presentation 15 mins
Portfolio - Component B	✓	60 %	Individual Coursework (max 2000 words)

Part 4: Teaching and Learning Methods	
Learning Outcomes	On successful completion of this module students will achieve the following learning outcomes:

Module Learning Outcomes	Reference
Investigate how data mining / machine learning is applied in a real-world business intelligence scenario.	MO1
Apply the concepts of machine learning and data mining in business intelligence applications and evaluate their effectiveness.	MO2
Critically evaluate ethical, security and privacy-related considerations in business intelligence applications.	MO3

Contact Hours	**Independent Study Hours:**	
	Independent study/self-guided study	225
	Total Independent Study Hours:	225
	Scheduled Learning and Teaching Hours:	
	Face-to-face learning	75
	Total Scheduled Learning and Teaching Hours:	75
	Hours to be allocated	300
	Allocated Hours	300
Reading List	*The reading list for this module can be accessed via the following link:*
	https://uwe.rl.talis.com/modules/ufcfmm-30-3.html

Part 5: Contributes Towards
This module contributes towards the following programmes of study:

Business Computing [Sep][FT][Frenchay][3yrs] BSc (Hons) 2019-20

Business Computing {Foundation} [Sep][FT][Frenchay][4yrs] BSc (Hons) 2018-19

Business Computing [Sep][SW][Frenchay][4yrs] BSc (Hons) 2018-19

Information Technology {Top-Up} [Sep][FT][Frenchay][1yr] BSc (Hons) 2021-22