University of the West of Scotland
Module Descriptor

Session: 2023/24
Last modified: 29/02/2024
Status: Pending

Title of Module: Technologies for Business Intelligence			
Code: COMP11013	**SCQF Level: 11** **(Scottish Credit and Qualifications Framework)**	**Credit Points: 10**	**ECTS: 5** **(European Credit Transfer Scheme)**
School:	School of Computing, Engineering and Physical Sciences		
Module Co-ordinator:	Junkang Feng		

Summary of Module

Business intelligence (BI) is an umbrella term that refers to the processes for collecting and analysing data, the technologies used in the processes, and the information obtained from these processes with the purpose of facilitating corporate decision making. In this module we focus on the key technologies that can form part of a BI implementation: data warehousing, online analytical processing (OLAP), data mining and modern 'analytics and business intelligence platforms'. The aim is to provide students with an understanding of key traditional and modern BI technologies and basic practical skills of using these technologies in tackling BI problems. Theoretical and methodological discussions will be provided in lectures, and lab based coursework will be used to develop students' aforementioned practical skills and to enhance their theoretical and conceptual understanding covered with this module. This module is also available in distance learning format.

During the course of this module students will develop their UWS Graduate Attributes (https://www.uws.ac.uk/current-students/your-graduate-attributes/). Universal: Academic attributes - critical thinking and analytical & inquiring mind; Work-Ready: Academic attributes - knowledge of key traditional and modern BI technologies and implementation skills with BI software; Successful: autonomous, driven and resilient.

Module Delivery Method

Face-To-Face	Blended	Fully Online
✓	✓	✓

Face-To-Face
Term used to describe the traditional classroom environment where the students and the lecturer meet synchronously in the same room for the whole provision.
Fully Online
Instruction that is solely delivered by web-based or internet-based technologies. This term is used to describe the previously used terms distance learning and e learning.
Blended
A mode of delivery of a module or a programme that involves online and face-to-face delivery of learning, teaching and assessment activities, student support and feedback. A programme may be considered "blended" if it includes a combination of face-to-face, online and blended modules. If an online programme has any compulsory face-to-face and campus elements it must be described as blended with clearly articulated delivery information to manage student expectations

Campus(es) for Module Delivery						
The module will **normally** be offered on the following campuses / or by Distance/Online Learning: (Provided viable student numbers permit)						
Paisley:	Ayr:	Dumfries:	Lanarkshire:	London:	Distance/Online Learning:	Other:
✓					✓	

Term(s) for Module Delivery					
(Provided viable student numbers permit).					
Term 1		Term 2	✓	Term 3	

Learning Outcomes: (maximum of 5 statements)
On successful completion of this module the student will be able to: L1. Critically evaluate key traditional and modern BI technologies through the appraisal of relevant theoretical and practical aspects L2. Demonstrate practical skills in the use of key BI technologies L3. Critically appraise development methodologies/techniques used in the development of a BI implementation L4. Demonstrate competence in analysis and evaluation of core functionalities of key BI technologies

Employability Skills and Personal Development Planning (PDP) Skills	
SCQF Headings	During completion of this module, there will be an opportunity to achieve core skills in:
Knowledge and Understanding (K and U)	SCQF Level 11. Understanding of the principles of Data Warehousing, OLAP, Data Mining and Modern analytics and business intelligence platforms.
Practice: Applied Knowledge and Understanding	SCQF Level 11. Making effective use key BI technologies to achieve BI implementations for specific business objectives. Practical evaluation of BI software. Evaluation of development methodologies/techniques used in the development of a BI implementation.
Generic Cognitive skills	SCQF Level 11. Critical analysis and application of knowledge and judgment about key BI technologies.
Communication, ICT and Numeracy Skills	SCQF Level 11. Communication through the compilation of written reports for the coursework tasks suitable for peers, management and specialists.

Autonomy, Accountability and Working with others	SCQF Level 11. Either substantial autonomy in development activities or responsibility for own contribution to paired/group practical activities.

Pre-requisites:	Before undertaking this module the student should have undertaken the following:	
	Module Code:	**Module Title:**
	Other:	
Co-requisites	**Module Code:**	**Module Title:**

* Indicates that module descriptor is not published.

Learning and Teaching	
The module aims to engage students through thought provoking, stimulating and collaborative activities that inspire and challenge students to succeed. All teaching materials are available on the UWS Moodle site for the module. They aim to be accessible and provide a dynamic learning community for students with a discussion forums with student contributions. The fast pace of change of BI technologies provides an ideal opportunity for students to research the latest developments. YouTube and other online tools are used.	
Learning Activities During completion of this module, the learning activities undertaken to achieve the module learning outcomes are stated below:	**Student Learning Hours** (Normally totalling 200 hours): (Note: Learning hours include both contact hours and hours spent on other learning activities)
Lecture/Core Content Delivery	10
Tutorial/Synchronous Support Activity	
Laboratory/Practical Demonstration/Workshop	10
Independent Study	54
Asynchronous Class Activity	26
	100 Hours Total

****Indicative Resources: (eg. Core text, journals, internet access)**

The following materials form essential underpinning for the module content and ultimately for the learning outcomes:

Database Systems: A Practical Approach to the Design, Implementation and Management (6th Edition) by T. Connolly and C. Begg, Addison Wesley Publishing Company, 2015.

Fundamentals of Database Systems, Global Edition (7th Edition) by Ramez Elmasri and Shamkant B. Navathe, Person Education Limited, 2017.

Practical Business Intelligence by Ahmed Sherif, Packt Publishing Ltd, 2016. ISBN 978-1-78588-543-3

Moodle Materials available online. All course materials available electronically are placed on Moodle. These include lecture slides, lab sessions, assessments and additional reference material.

Software: Suitable tools for data management and BI such as Microsoft SQL Server 2012 or newer, Tableau Desktop 2019.2 or newer, or Microsoft Power BI Desktop December 2019 Update (2.76.5678.661).

(**N.B. Although reading lists should include current publications, students are advised (particularly for material marked with an asterisk*) to wait until the start of session for confirmation of the most up-to-date material)

Attendance Requirements

In line with the Academic Engagement and Attendance Procedure, Students are defined as academically engaged if they are regularly engaged with timetabled teaching sessions, course-related learning resources including those in the Library and on Moodle, and complete assessments and submit these on time. Please refer to the Academic Engagement and Attendance Procedure at the following link: Academic engagement and attendance procedure

Supplemental Information

Programme Board	Computing
Assessment Results (Pass/Fail)	No
Subject Panel	Business & Applied Computing
Moderator	Carolyn Begg
External Examiner	Chun Luo
Accreditation Details	Not Applicable
Version Number	2.14 **Changes** Significant changes to Title, Summary of Module, Learning Outcomes, Employability Skills and Personal Development Planning (PDP) Skills, Learning and Teaching, Learning Activities, Student Learning Hours and Indicative Resources. Graduate Attributes amended.

Assessment: (also refer to Assessment Outcomes Grids below)

Practical Assignment or Critical Report 100%

(N.B. (i) **Assessment Outcomes Grids** for the module (one for each component) can be found below which clearly demonstrate how the learning outcomes of the module will be assessed.
(ii) An **indicative schedule** listing approximate times within the academic calendar when assessment is likely to feature will be provided within the Student Handbook.)

Assessment Outcome Grids (Footnote A.)

Component 1

Assessment Type (Footnote B.)	Learning Outcome (1)	Learning Outcome (2)	Learning Outcome (3)	Learning Outcome (4)	Weighting (%) of Assessment Element	Timetabled Contact Hours
Portfolio of practical work	✓	✓	✓	✓	100	0
Combined Total For All Components					100%	0 hours

Footnotes
A. Referred to within Assessment Section above
B. Identified in the Learning Outcome Section above

Note(s):

1. More than one assessment method can be used to assess individual learning outcomes.
2. Schools are responsible for determining student contact hours. Please refer to University Policy on contact hours (extract contained within section 10 of the Module Descriptor guidance note). This will normally be variable across Schools, dependent on Programmes &/or Professional requirements.

Equality and Diversity

Nothing in the module should present difficulties for students on the basis of their gender, ethnicity, or sexual orientation. In relation to students with disabilities, when a student discloses a disability the individual module tutor, in consultation with the School's Enabling Support co-ordinator, will agree any appropriate adjustments to be made. Students should note that the language of instruction is English and that they will need to have a reasonable grasp of the language in order to keep abreast of the teaching materials and in submitting assessed work.
UWS Equality and Diversity Policy

(N.B. Every effort will be made by the University to accommodate any equality and diversity issues brought to the attention of the School)