Prifysgol Wrecsam
Wrexham University

Module specification

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Refer to guidance notes for completion of each section of the specification.

Module Code	ONLM727
Module Title	Business Intelligence & Visualisation Tools
Level	7
Credit value	15
Faculty	FSALs
HECoS Code	100079
Cost Code	GABP

Programmes in which module to be offered

Programme title	Is the module core or option for this programme
MSc Business Analytics	Core

Pre-requisites

None

Breakdown of module hours

Learning and teaching hours	15 hrs
Placement tutor support	0 hrs
Supervised learning e.g. practical classes, workshops	0 hrs
Project supervision (level 6 projects and dissertation modules only)	0 hrs
Total active learning and teaching hours	15 hrs
Placement / work based learning	0 hrs
Guided independent study	135 hrs
Module duration (total hours)	150 hrs

For office use only	
Initial approval date	29th July 2024
With effect from date	September 2024
Date and details of revision	
Version number	1

Module aims

The module introduces decision-making, and technologies used to support organisational decision-making. (BI), which uses historical data to better understand and thereby improve business performance, as well as create new strategic opportunities for growth. Part of this process is to display the results in graphical images for easier understanding. This module will provide an understanding of data organisation, and examine the BI processes and techniques used in transforming data into knowledge and value. Various functions and applications of business intelligence are described, including but not limited to reporting, online analytical processing, data visualisation and business process management.

Module Learning Outcomes - at the end of this module, students will be able to:

1	Critically evaluate the capabilities of Business Intelligence technologies and tools and develop strategies for leveraging these capabilities to support effective data analysis and decision making.
2	Critically analyse the use of different technologies in supporting performance decision making and identify best practices for selecting and implementing appropriate tools and systems.
3	Differentiate between different types of data visualisations and their applications and benefits, and design effective visualisations that enable efficient and effective data analysis.
4	Critically examine the technological architecture that makes up business intelligence systems and evaluate the role of each component in supporting effective data management and analysis.
5	Outline and critically justify an effective data visualisation strategy that leverages best practices in data visualisation design and enables effective communication and decision making.

Assessment

Indicative Assessment Tasks:

Formative Assessment

Formative assessment for this module may include:

End of lesson questions or quizzes, to check knowledge at the end of each unit and module, feedback on subject discussion forums, sharing experiences in groups, self and peer

assessment and one-minute papers, to demonstrate understanding and progress of subject knowledge, and improve learning.

Summative Assessment

Assignment 1:

Learners are to partake in a practical quiz to critically evaluate the different business intelligence technologies and tools available, and to evidence application of such tools to identify appropriate key performance metrics and indicators within a business decision-making context.

Assignment 2:

Learners are to present a written critical evaluation in a format of their choice, between different types of data visualisations and their applications and benefits, the technological architecture that makes up business intelligence systems and justify an effective data visualisation strategy that leverages best practices in data visualisation design. (Indicative word count – 2,000 words).

Assessment number	Learning Outcomes to be met	Type of assessment	Weighting (%)
1	1, 2	In-class test	40%
2	3, 4, 5	Written Assignment	60%

Derogations
None

Learning and Teaching Strategies

The overall learning and teaching strategy is one of guided independent study, in the form of distance learning requiring ongoing student engagement. Online material will provide the foundation of the learning resources, to support a blended approach, requiring the students to log-in and engage on a regular basis throughout the eight-week period of the module. There will be a mix of recorded lectures and supporting notes/slides, containing embedded digital content and self-checks for students to complete as they work through the material and undertake the assessment tasks. The use of a range digital tools via the virtual learning environment together with additional sources of reading will also be utilised to accommodate learning styles. There is access to a helpline for additional support and chat facilities through Canvas for messaging and responding.

Indicative Syllabus Outline

Overview of decision making
Business intelligence capabilities and benefits
Technologies enabling business intelligence
Data visualisation and reporting
Dashboard and balanced scorecard
Big data intelligence and solutions

Indicative Bibliography:

Please note the essential reads and other indicative reading are subject to annual review and update. Please *ensure correct referencing format is being followed as per University Harvard Referencing Guidance.*

Essential Reads

Journal of Business and Management
International Journal of Business and Management
Journal of International Economics
International Tade Journal
Journal of Business Research
Journal of Data Analytics
International Journal of Data Science and Analytics
International Journal of Corporate Social Responsibility

Other indicative reading

Asplen-Taylor, S. (2022), Data Analytics Strategy for Business: Unlock Data Assets and Increase Innovation with Results Driven Data Strategy, London, Kogan Page.

Field, Andy. (2017). Discovering Statistics Using IBM SPSS Statistics, Fifth Edition, Paperback, London, UK, Publisher: SAGE Publications Ltd.

Wooldridge, Jeffrey M. (2019). Introductory Econometrics: A Modern Approach, Seventh Edition, (MindTap Course List). Boston, USA, Publisher: Cengage Learning.