

Prifysgol Wrexham Wrexham University

Module specification

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Module Code	BUS7F3
Module Title	Business Analytics and AI
Level	7
Credit value	30
Faculty	Wrexham Business School /FSLS
HECoS Code	100079
Cost Code	GABP
Pre-requisite module	N/A

Programmes in which module to be offered

Programme title	Core/Optional/Standalone
MSc International Business and Management	Core
MSc International Business and Management with Advanced Practice	Core
MSc International Health Services Management	Core
MSc International Health Services Management with Advanced Practice	Core
MSc Human Resource Management	Core
MSc Human Resource Management with Advanced Practice	Core

Breakdown of module hours

Learning and teaching hours	30 hrs
Placement tutor support hours	0 hrs
Supervised learning hours e.g. practical classes, workshops	0 hrs
Project supervision hours	0 hrs
Active learning and teaching hours total	30 hrs
Placement hours	0 hrs
Guided independent study hours	270 hrs
Module duration (Total hours)	300 hrs

Module aims

The aim of this module is to develop analytical skills to enable learners to build capabilities and understanding of how organisational data across business functions can be transformed into strategic insights for performance and competitive advantage. It is the bridge between academic theory and applied innovation and practice, that equips learners with the necessary knowledge to transfer data from systems to insights and make data-driven decision-making in complex and uncertain business environments. This module demonstrates the degree of technical, applied, and skills-based components required for a Business MSc.

Module Learning Outcomes

At the end of this module, students will be able to:

1	Critically evaluate the different types of analytical techniques used in organisations.
2	Apply evidence-based questioning models to real organisational data.
3	Interpret and communicate insights to executive audiences.
4	Critically examine the role of ethical, legal, compliance, and governance in the use of organisational data.
5	Design data-driven workforce solutions to complex business problems using appropriate analytical frameworks and tools.

Assessment

Indicative Assessment Tasks:

This section outlines the type of assessment task the student will be expected to complete as part of the module. More details will be made available in the relevant academic year module handbook.

Assessment 1: Portfolio (2 parts)

Word count – 2,500 words

Part 1 - Data Analysis Portfolio.

You are to present a portfolio of short tasks demonstrating your technical skills using analytical techniques.

Part 2 - Written Report

Present a written report synthesising the analytical outputs generated through the short tasks you completed in part 1. You will transform these into strategic insights for organisational decision-making. Your report will critically examine how analytical tools can be applied to real-business challenges to support performance improvements. Alongside this you will consider the ethical, governance, and legal compliance.

Assessment 2: Written Presentation - Academic Poster

Word count – 1,000 words

Following assessment 1, you are to present an academic poster. Using data insights you will choose a cluster analysis, identifying a distinct operational issue or problem such as growth segment or inconsistent data quality. Drawing on academic literature you will present an academic poster which designs a framework that considers the challenge, key insights, solutions and recommendations to the problem. Your framework must be suitable for real-world implementation.

Assessment number	Learning Outcomes to be met	Type of assessment	Duration/Word Count	Weighting (%)	Alternative assessment, if applicable
1	1, 2, 3, 4	Portfolio	2,500	60%	N/A
2	5	Presentation	1,000	40%	N/A

Derogations

N/A

Learning and Teaching Strategies

The teaching and learning for this module will focus on a scaffold approach, and will include action learning sets, industry integration and applied workshops.

Students will learn through a variety of formats including lectures, seminars, tutorials, group work, focus groups, group, peer and individual work, facilitated learning (e.g. scale-up), as well as independent directed study. The university's Active Learning Framework (ALF) will be learner-centred and integral to this strategy, enhancing student engagement, participation and interaction. The ALF framework will focus on the construction of knowledge through activities, to develop thinking, problem-solving and collaboration.

This module will be delivered through block teaching, to deepen learning, focus, and knowledge retention. Integrated learning, including where possible simulation and the use of immersive learning spaces will underpin formative and summative assessment, and allow for integrative peer collaboration.

Modes of delivery will include on campus and blended, enabling greater flexibility for learning and engagement. As the summative assessment builds throughout the module, it will create opportunities to conceptualise learning, critical thinking, networking, and applied knowledge.

Welsh Elements

Every student has the right to submit written work or examinations in Welsh. All Welsh speaking students have the right to a Welsh speaking tutor. Elements of the Welsh language and culture will be embedded throughout the module where possible.

Indicative Syllabus Outline

1. Foundations of business analytics
2. Understanding analytics in different business functions
3. Applying analytical techniques (i.e. descriptive, diagnostic, predictive, and prescriptive)
4. Tools and technologies
5. AI and innovation
6. Data ethics, governance and compliance
7. Datasets and application
8. Applying storytelling

Indicative Bibliography

Please note the essential reads and other indicative reading are subject to annual review and update.

Essential Reads:

Abdey, J. (2023), *Business Analytics : Applied Modelling and Prediction*. London: SAGE Publications Ltd.

Other indicative reading:

Maisel, L.S., Zwerling, R.J. and Sorensen, J.H. (2022), *AI-Enabled Analytics for Business: A Roadmap for Becoming an Analytics Powerhouse*. 1st ed. Newark: John Wiley & Sons, Incorporated.

Administrative Information

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Initial approval date	08/06/26
With effect from date	01/09/26
Date and details of revision	
Version number	1