

MODULE DESCRIPTOR

MODULE TITLE	BUSINESS INTELLIGENCE AND DATA ANALYTICS		
MODULE CODE	CO4761 (L7)	CREDIT VALUE	20 UK CREDITS / 10 ECTS
SCHOOL	SCHOOL OF SCIENCES		

MODULE AIMS

The main aim of the module is to provide a comprehensive, up-to-date guide to modern management support system technologies, and showcase how they can be used for better decision-making.

The main objectives of the module are to:

- Provide an in-depth knowledge of the use of enterprise systems
- Study the type of data that the enterprise systems generate
- Study how that data might be used to support decision making within an enterprise

MODULE CONTENT

Indicative syllabus content:

Decision Making and Analytics: Business Environment, Computerized Support, Managerial Decision Making, Decision Support Systems, BI Methodology, Analytics Overview,

Descriptive Analytics: Data Warehouses, Data Mining Concepts, Business Reporting, Visual Analytics, and Business Performance Management

Predictive Analytics: Data Mining, CRISP-DM, SEMMA, KDD, Tools, Techniques for Predictive Modelling, Text Analytics, Text Mining, Sentiment Analysis, Web Analytics, Web Mining, and Social Analytics

Prescriptive Analytics: Model-Based Decision Making: Optimization and Multi-Criteria Systems, Modelling and Analysis: Heuristic Search Methods and Simulation, Automated Decision Systems and Expert Systems, Knowledge Management and Collaborative Systems

Big Data and Future Directions for Business Analytics: Big Data Analytics, Emerging Trends and Future Impacts

INTENDED LEARNING OUTCOMES

On successful completion of this module a student will be able to:

1. Identify and evaluate the role of enterprise systems in an organisation.
2. Discuss and apply a range of predictive and prescriptive analytical techniques to business scenarios.
3. Query relevant data from an enterprise system for analysis purposes.
4. Critically evaluate the range of relevant business intelligence tools available in the marketplace.

TEACHING METHODS

Lectures deliver factual material, introduce key concepts, direct reading and relate academic aspects to practical considerations.

Tutorial sessions allow students to apply the techniques and reinforce the material delivered in the lecture.

Practical sessions enable students to discuss material and complete online or paper-based exercises.

The module will be assessed by one written course work. The assignment requires the student to strategically use prescriptive and predictive analytics in business scenarios.

Distance learning

The module tutor will deliver live online lectures through Microsoft Teams. In the first introductory lecture, the module leader will start building engagement and motivation with the module content by asking students to share their expectations and goals about the module in a real-time and anonymous manner, e.g., using Microsoft Forms. The module leader will then provide feedback on how the module will meet their expectations and at which level. The introductory course will also provide clear guidance on how course activities should be completed. During the live lectures the participating students will have the opportunity to engage in discussions, present their views and ask questions. The module tutor will use opportunities like office hours and breakout groups on Teams to encourage discussion among students. Also, discussion

forums will be utilised for collaborative activities, such as soliciting questions and peer-reviewing. The lecture sessions will be recorded and made available to the students through Blackboard. Students who cannot participate in a live lecture will have the opportunity to answer and reflect on guided questions in the subsequent live lectures or participate asynchronously on discussion boards. The module tutor will provide appropriate feedback to students' comments, as a result of the discussions. Tutor feedback will primarily be provided in an asynchronous manner through Blackboard and emails, but when the need arises, the module tutor will schedule live sessions to provide further feedback. Where appropriate, students will be also provided with relevant further reading, web links and resources for independent study. Speakers from leading organizations will be invited, where possible, to deliver invited talks and enhance the students' experience. 21 Students will also be provided with bi-weekly self-assessment quizzes, so that they can reflect on their progress. Students will be provided with access to specialised software/ datasets/ scripts/ programmes, through which they will be able to complete the practical components of the module. The students will obtain the practical sheets from Blackboard and they are expected to follow the instructions included in the practical sheets to complete the lab work. If students have difficulties with a particular exercise, they are expected to contact the module tutor or post a question on the discussion forum, where the module tutor and/or their peers can provide feedback. Different means of communication will be utilized by the tutor to offer support to the students based on the reported issue, i.e. email, Skype, Microsoft Teams, etc

ASSESSMENT METHODS

This module is assessed through one Portfolio of coursework and one Examination.