

MODULE DESCRIPTOR

MODULE TITLE	Business Intelligence and Data Analytics		
MODULE CODE	CO4761 (L7)	CREDIT VALUE	20 Credits (10 ECTS)
SCHOOL	SCHOOL OF SCIENCE		

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

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.

ASSESSMENT METHODS

This module is assessed through a Case study portfolio of practical work (100%).