

## MODULE DESCRIPTOR

### Module Title

Introduction to Business Analytics

Reference	CM1706	Version	4
Created	February 2024	SCQF Level	SCQF 7
Approved	June 2019	SCQF Points	30
Amended	April 2024	ECTS Points	15

### Aims of Module

To introduce the data analytics lifecycle (clean, transform, analyse and visualise data), and provide an understanding of the statistical techniques involved in business analytics.

### Learning Outcomes for Module

On completion of this module, students are expected to be able to:

- 1 Describe the organisation's data strategy and governance.
- 2 Convey the results of data analysis through appropriate visualisation methods.
- 3 Apply statistical techniques to a variety of datasets.
- 4 Implement a simple data science solution.
- 5 Recognise the professional, ethical and legal issues within data analysis.

### Indicative Module Content

Enterprise data strategy, governance and stewardship. Data preparation and cleaning methods. Data exploration, summarisation, transformation and visualisation techniques. Introduction to and use of Python libraries to process and analyse a range of data types. Statistical techniques for data analysis: hypothesis testing; standard deviation; regression; correlation; sample size determination; experimental design. Professional, ethical and legal issues within data analysis; data bias.

### Module Delivery

The module is delivered in Blended Learning mode using structured online learning materials/activities and directed study, facilitated by regular online tutor support. Workplace Mentor support and work-based learning activities will allow students to contextualise this learning to their own workplace. Face-to-face engagement occurs through annual induction sessions, employer work-site visits, and modular on-campus workshops.

**Indicative Student Workload**

	Full Time	Part Time
Contact Hours	30	N/A
Non-Contact Hours	30	N/A
Placement/Work-Based Learning Experience [Notional] Hours	240	N/A
TOTAL	300	N/A
<i>Actual Placement hours for professional, statutory or regulatory body</i>	240	

**ASSESSMENT PLAN**

If a major/minor model is used and box is ticked, % weightings below are indicative only.

**Component 1**

Type: Coursework Weighting: 100% Outcomes Assessed: 1, 2, 3, 4, 5

Description: This coursework will consist of a practical data analytics exercise, and a discussion on business data strategies and professional, legal and ethical issues within the workplace.

**MODULE PERFORMANCE DESCRIPTOR****Explanatory Text**

The calculation of the overall grade for this module is based on 100% weighing of C1. An overall minimum grade D is required to pass the module

Module Grade	Minimum Requirements to achieve Module Grade:
<b>A</b>	The student needs to achieve an A in C1
<b>B</b>	The student needs to achieve a B in C1
<b>C</b>	The student needs to achieve a C in C1
<b>D</b>	The student needs to achieve a D in C1
<b>E</b>	The student needs to achieve an E in C1
<b>F</b>	The student needs to achieve an F in C1
<b>NS</b>	Non-submission of work by published deadline or non-attendance for examination

**Module Requirements**

Prerequisites for Module	None, in addition to course entry requirements.
Corequisites for module	None.
Precluded Modules	None.

**INDICATIVE BIBLIOGRAPHY**

- 1 JAMES, G. et al., 2013. An introduction to statistical learning: with applications in R. New York, NY: Springer.
- 2 MCKINNEY, W., 2013. Python for Data Analysis: Data Wrangling with Pandas, NumPy, and IPython. O'Reilly.
- 3 PROVOST, F. and FAWCETT, T., 2013. Data science for business. Beijing, China: O'Reilly.
- 4 LANE, D.M. et al., n.d. Online statistics education: an interactive multimedia course of study. [online]. Houston, TX: Rice University. Available from: <http://onlinestatbook.com/> [Accessed 5 March 2019].
- 5 PADMANBHAN, T.R., 2016. Programming with Python. Singapore: Springer.