**This Version is No Longer Current**
The latest version of this module is available here

## MODULE DESCRIPTOR

### Module Title

Introduction to Business Analytics

| | | | |
|---|---|---|---|
| Reference | CM1706 | Version | 2 |
| Created | June 2022 | SCQF Level | SCQF 7 |
| Approved | June 2019 | SCQF Points | 30 |
| Amended | July 2022 | 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 | Develop awareness of the organisation's data strategy and governance. |
| 2 | Use different methods for preparing data for analysis. |
| 3 | Apply statistical techniques to a variety of datasets. |
| 4 | Develop a simple data science solution and communicate results through appropriate visualisation. |
| 5 | Develop awareness of 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.

| Module Ref: | CM1706 v2 |
|---|---|

| **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 |
| *Actual Placement hours for professional, statutory or regulatory body* | 240 | |

## ASSESSMENT PLAN

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

### Component 1

| Type: | Coursework | Weighting: | 50% | Outcomes Assessed: | 2, 3, 4 |
|---|---|---|---|---|---|
| Description: | This coursework will consist of a business analytics exercise. | | | | |

### Component 2

| Type: | Practical Exam | Weighting: | 50% | Outcomes Assessed: | 1, 5 |
|---|---|---|---|---|---|
| Description: | This practical exam will consist of a presentation on aspects of the data analytics lifecycle as demonstrated within the workplace environment. | | | | |

## MODULE PERFORMANCE DESCRIPTOR

### Explanatory Text

The module is assessed on a pass/unsuccessful basis. The Module Grade is based on performance in Component 1 (coursework) and Component 2 (exam) as detailed below.

| Module Grade | Minimum Requirements to achieve Module Grade: |
|---|---|
| **Pass** | Pass in Component 1 and pass in Component 2. |
| **Fail** | Fail in Component 1 and/or fail in Component 2. |
| **NS** | Non-submission of work by published deadline or non-attendance for examination |

## Module Requirements

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|---|---|
| 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. |