**This Version is No Longer Current**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

## MODULE DESCRIPTOR

### Module Title

Programming for Business Analytics

| | | | |
|---|---|---|---|
| Reference | CMM202 | Version | 1 |
| Created | March 2018 | SCQF Level | SCQF 11 |
| Approved | July 2018 | SCQF Points | 15 |
| Amended | | ECTS Points | 7.5 |

### Aims of Module

This module teaches students to process, manipulate, visualize and analyse data using Python. Students will explore the capabilities of existing libraries and work on projects where they develop programming and data analytics skills in a business analytics context.

### Learning Outcomes for Module

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

| | |
|---|---|
| 1 | Develop and apply computational solutions to data analytics problems |
| 2 | Demonstrate critical understanding of how to extend core python functionality through the use of existing modules and libraries |
| 3 | Design, implement and evaluate reproducible data analytics solutions |
| 4 | Work effectively as part of a small team to specify and implement a data analytics solution within a business analytics context |

### Indicative Module Content

Data cleaning, preparation and wrangling; plotting and visualization; advances data analytics techniques matched to business requirements. Introduction to and use of Python libraries such as numpy, pandas, matplotlib and nltk to process and analyse a range of data types.

### Module Delivery

Core concepts and examples will be introduced in lectures. Practical skills will be developed through structured lab exercises and coursework exercises.

| Module Ref: | CMM202 v1 |
|---|---|

| **Indicative Student Workload** | Full Time | Part Time |
|---|---|---|
| Contact Hours | 36 | 36 |
| Non-Contact Hours | 114 | 114 |
| Placement/Work-Based Learning Experience [Notional] Hours | N/A | N/A |
| TOTAL | 150 | 150 |
| *Actual Placement hours for professional, statutory or regulatory body* | | |

## 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: | 1, 4 |
|---|---|---|---|---|---|
| Description: | A group based coursework. | | | | |

### Component 2

| Type: | Coursework | Weighting: | 50% | Outcomes Assessed: | 2, 3 |
|---|---|---|---|---|---|
| Description: | An individual coursework. | | | | |

## MODULE PERFORMANCE DESCRIPTOR

### Explanatory Text

Component C1 is a group-based coursework. Component C2 is an individual coursework.

| | | Coursework: | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | **A** | **B** | **C** | **D** | **E** | **F** | **NS** |
| Coursework: | **A** | A | A | B | B | C | E | |
| | **B** | A | B | B | C | C | E | |
| | **C** | B | B | C | C | D | E | |
| | **D** | B | C | C | D | D | E | |
| | **E** | C | C | D | D | E | E | |
| | **F** | E | E | E | E | E | F | |
| | **NS** | Non-submission of work by published deadline or non-attendance for examination | | | | | | |

## Module Requirements

| | |
|---|---|
| Prerequisites for Module | None. |
| Corequisites for module | None. |
| Precluded Modules | None. |

## INDICATIVE BIBLIOGRAPHY


| | |
|---|---|
| 1 | MCKINNEY, W. (2013) *Python for Data Analysis. Data Wrangling with Pandas, NumPy, and IPython.* O'Reilly |
| 2 | LUTZ, M. (2013). *Learning Python.* (5th Ed.): O?Reilly |
| 3 | PADMANBHAN, T.R. (2016). *Programming with Python.* ELECTRONIC BOOK |
| 4 | *Python Language Specification*: https://www.python.org/ |