MODULE DESCRIPTOR

Module Title

Programming for Business Analytics

Reference	CMM202	Version	3
Created	February 2024	SCQF Level	SCQF 11
Approved	July 2018	SCQF Points	15
Amended	April 2024	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	Create computational solutions to data analytics problems.
2	Deal with extending core Python functionality by leveraging existing modules and libraries.
3	Generate reproducible data analytics solutions.
4	Produce 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.

Indicative Student Workload	Full Time	Part Time
Contact Hours	30	30
Non-Contact Hours	120	120
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	150
Actual Placement hours for professional, statutory or regulatory body		

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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
Description:	Prepare and visualise data within a business case context.				

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

An overall minimum grade of a D is required to pass the module.

Module Grade	Minimum Requirements to achieve Module Grade:
A	The student needs to achieve an A in C1.
B	The student needs to achieve a B in C1.
C	The student needs to achieve a C in C1.
D	The student needs to achieve a D in C1.
E	The student needs to achieve an E in C1.
F	The student needs to achieve an F in C1.
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/