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MODULE DESCRIPTOR

Module Title

Programming for Business Analytics

Reference	CMM202	Version	2
Created	April 2023	SCQF Level	SCQF 11
Approved	July 2018	SCQF Points	15
Amended	June 2023	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 v2

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:	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/