

MODULE DESCRIPTOR

Module Title

Introduction To Programming (Python)

Reference	CM1115	Version	2
Created	June 2022	SCQF Level	SCQF 7
Approved	January 2022	SCQF Points	15
Amended	July 2022	ECTS Points	7.5

Aims of Module

To provide the student with the fundamental knowledge and skills required to create computer programs within the context of analysing business data.

Learning Outcomes for Module

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

- 1 Critically appraise a range of tools, programming languages, interfaces and packages for data exploration and analysis in the context of business analytics.
- 2 Understand the main concepts of core programming.
- 3 Use existing methods and functions to wrangle and manage data.
- 4 Apply programming skills to present a business case.

Indicative Module Content

Overview of programming languages used for business analytics, fundamentals of programming (logic statements, conditional statements, loops, functions, classes, etc.), fundamentals of data analytics and visualisation, introduction to programming environments (IDE, console, Jupyter notebook), data structures (numbers, variables, strings, lists, tuples, NumPy arrays, etc.), introduction to pandas data frames, reusing existing functionalities, libraries and APIs, development of solutions for the business context, sharing code and working remotely & effectively (online notebooks and repositories e.g. GitHub, Kaggle, Colab, etc.).

Module Delivery

Key concepts are introduced through the lectures. The main emphasis of the course will be focused on the lab sessions where individual lab assignments will be interspersed with demonstrations of current techniques and practices. This combination will allow students to develop an understanding of the theoretical underpinning of modern programming structures, whilst promoting development of proficiency in the practical application of software development and data wrangling and management.

Indicative Student Workload

	Full Time	Part Time
Contact Hours	36	N/A
Non-Contact Hours	114	N/A
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	150	N/A
<i>Actual Placement hours for professional, statutory or regulatory body</i>		

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:	Portfolio of written work.				

MODULE PERFORMANCE DESCRIPTOR**Explanatory Text**

Component 1 (coursework) comprises 100% of the module grade. To pass the module, a D grade is required.

Module Grade	Minimum Requirements to achieve Module Grade:
A	A in Component 1
B	B in Component 1
C	C in Component 1
D	D in Component 1
E	E in Component 1
F	F in Component 1
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	Lutz, M. (2013). Learning Python (5th Ed). O'Reilly.
2	Padmanbhan, T.R. (2016). Programming with Python. [E-Book]
3	Hetland, M.L. (2017) Beginning Python: From Novice to Professional (3rd Ed.). [E-Book]
4	Parker, J. (2017). Python: An Introduction to Programming. [E-Book].
5	Udemy. Python for Business Analysis and Excel. https://www.udemy.com/course/python-for-business/
6	Moffitt, C. Practical Business Python. https://pbpython.com/
7	Python Language Specification. https://www.python.org