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MODULE DESCRIPTOR

Module Title

Introduction To Programming (Python)

Reference	CM1115	Version	1
Created	September 2021	SCQF Level	SCQF 7
Approved	January 2022	SCQF Points	15
Amended		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

This module uses the following delivery modes: Guided study (lectures, tutorials, and other learning materials delivered through VLE + bibliography), mentored practical work undertaken in the workplace, project work in the workplace including a design brief, personal study, group reflective sessions via VLE and at RGU. Key concepts are introduced and illustrated through lectures (physical and virtual). Theory is put into practice in the workplace guided by a mentor. The understanding of students is tested and further enhanced through virtual interactive labs and tutorials.

Module Ref:	CM1115 v1

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
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, 2
Description:	Work-based portfolio				

Component 2

Type:	Coursework	Weighting:	50%	Outcomes Assessed:	3, 4
Description:	Written coursework				

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

Two components, each contributing 50% to the overall module grade.

		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	Lutz, M. (2013). Learning Python (5th Ed). O?Reily.
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