MODULE DESCRIPTOR

Module Title

IT Infrastructure and Administration

Reference	CMM028	Version	3
Created	February 2023	SCQF Level	SCQF 11
Approved	July 2021	SCQF Points	15
Amended	June 2023	ECTS Points	7.5

Aims of Module

To enable students to understand the key concepts of computer systems and infrastructures, and to provide fundamental programming skills to effectively manage and support networked systems.

Learning Outcomes for Module

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

1	Identify key concepts and components of a computer and how it connects to the Internet.
2	Describe and discuss recent and evolving developments, system architectures and technologies.
3	Critically evaluate operating systems architecture, functionality and facilities.
4	Implement effective interconnections between system programs.
5	Design and implement scripts for network connectivity and information management.

Indicative Module Content

Overview of computer systems and network components. Common system architectures and patterns: client-server, publisher-subscriber. Internet of Things. Cloud computing. Software/library installation and configuration. Programming concepts. Network programming and interfacing with APIs. Operating systems programming and interacting with the OS.

Module Delivery

Key concepts are introduced and illustrated through lectures and directed reading. Laboratory sessions provide a series of exercises designed to develop proficiency in techniques essential to the development of software program.

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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		

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

Type:	Practical Exam	Weighting:	100%	Outcomes Assessed:	1, 2, 3, 4, 5
Description:	A computer-based assessment involving questions about the material covered on the module and a practical test of skills developed.				

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

The calculation of the overall grade for this module is based on the grade obtained in the practical assessment.

Module Grade	Minimum Requirements to achieve Module Grade:
A	A grade in Component 1
B	B grade in Component 1
C	C grade in Component 1
D	D grade in Component 1
E	E grade in Component 1
F	F grade 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	SARKER, 2016. Learning Python Network Programming. Packt Publishing.
2	RHODES & GOERZEN, 2014. Foundations of Python Network Programming. Apress.
3	Buyya, Rajkumar; Dastjerdi, Amir Vahid. Internet of Things: Principles and Paradigms. Cambridge, MA 2016.
4	ERL, T., MAHMOOD, Z., PUTTINI, R., 2013. Cloud Computing: Concepts, Technology & Architecture. Prentice Hall.