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MODULE DESCRIPTOR

Module Title

Operating Systems

Reference	CM3102	Version	3
Created	April 2018	SCQF Level	SCQF 9
Approved	July 2016	SCQF Points	15
Amended	July 2018	ECTS Points	7.5

Aims of Module

To understand the design, construction, and functioning of operating systems and provide the student with the ability to administer proficiently the resources they provide.

Learning Outcomes for Module

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

1	Explain the architecture and design principles of an operating system with due regard to system protection and security.
2	Describe the external and internal functionality of a typical operating system.
3	Design and implement programs that use operating system features.
4	Analyse and interact with the management of resources of an operating system.

Indicative Module Content

The main focus of the module is to obtain an in-depth knowledge of operating systems and gain experience using various OS features. Introduction to systems programming using system calls and standard system data types OS structure and operations System Protection and Security Virtualisation.

Module Delivery

Key concepts are introduced and illustrated through lectures and directed reading. The understanding of students is tested and further enhanced through interactive tutorials. In the laboratories, the student will progress through a sequence of exercises to develop sufficient knowledge and skills in operating systems.

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		

Module Ref:	CM3102 v3

ASSESSMENT PLAN

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

Component 1

Type:	Examination	Weighting:	25%	Outcomes Assessed:	1, 2
Description:	A closed book examination.				

Component 2

Type:	Coursework	Weighting:	75%	Outcomes Assessed:	3, 4
Description:	A coursework assignment.				

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

The calculation of the overall grade for this module is based on 25% weighting of C1 and 70% weighting of C2. An overall minimum grade D is required to pass the module.

		Coursework:						
		A	**B**	**C**	**D**	**E**	**F**	**NS**
Examination:	**A**	A	B	B	C	D	E	
	B	A	B	C	C	D	E	
	C	B	B	C	D	D	E	
	D	B	C	C	D	D	E	
	E	C	C	D	D	E	F	
	F	C	D	D	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	SILBERSCHATZ, A., GALVIN,PB.,and GAGNE,G.,2013. Operating System Concepts. 9th ed. Hoboken: John Wiley & Sons.
2	STALLINGS,W.,2014. Operating Systems:Internals and Design Principles,8th ED.,Boston:Pearson Education.
3	KERRISK,M.,2010. The Linux Programming Interface:A Linux UNIX System Programming Handbook,San Fransisco:No Starch Press.
4	BASTA, A., FINNAMORE, D., PALLADINO, S, Linux Operations and Administration. International Edition: Cengage Learning, 2013
5	TANENBAUM, A & BOS, H. 2014 Modern Operating Systems. 4th Ed. Pearson Education
6	NEWPORT., 2017.?Linux: The ultimate guide to Linux for beginners, Linux hacking, Linux command line, Linux operating system, and more. 1st Edition. CreateSpace Independent Publishing Platform.
7	JONES., 2017.?Linux: The Fundamentals Of The Linux Operating System: A Complete Beginners Guide To Linux Mastery. 1st Edition. CreateSpace Independent Publishing Platform.