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MODULE DESCRIPTOR

Module Title

Cloud Computing

Reference	CM4108	Version	2
Created	April 2018	SCQF Level	SCQF 10
Approved	August 2017	SCQF Points	15
Amended	June 2018	ECTS Points	7.5

Aims of Module

To explore the key concepts and issues of cloud computing which will enable students to assess the suitability of applying cloud technologies and to develop the skills required to construct cloud-based applications.

Learning Outcomes for Module

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

- 1 Identify and discuss the key concepts and issues in cloud computing.
- 2 Identify and explain the main principles and techniques in cloud computing.
- 3 Identify and describe the recent trends and developments in cloud computing technologies.
- 4 Apply technical skills to design and construct cloud-based applications.
- 5 Integrate software components to construct cloud-based applications.

Indicative Module Content

Definitions of Cloud Computing, benefits and limitations of Cloud Computing, migrating into the cloud, cloud delivery models (IaaS, PaaS, SaaS), cloud deployment models (private, public, hybrid), service-oriented architecture, RESTful web services design, auto-scaling, security in the cloud, costing, examples of service providers and APIs.

Module Delivery

Key concepts are introduced and illustrated through the medium of lectures. Laboratory sessions provide a series of exercises designed to develop proficiency in techniques essential to the development of cloud-based applications.

Indicative Student Workload

	Full Time	Part Time
Contact Hours	44	N/A
Non-Contact Hours	106	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:	Examination	Weighting:	50%	Outcomes Assessed:	1, 2, 3
Description:	Exam worth 50% of total module assessment.				

Component 2

Type:	Coursework	Weighting:	50%	Outcomes Assessed:	4, 5
Description:	Coursework worth 50% of total module assessment.				

MODULE PERFORMANCE DESCRIPTOR**Explanatory Text**

The calculation of the overall grade for this module is based on 50% weighting of C1 and 50% weighting of C2. An overall minimum grade D is required to pass the module.

		Examination:						
		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 VELTE, T., VELTE, T.J., and ELSENPETER, R, 2010. Cloud Computing: A Practical Approach. McGraw Hill.
- 2 ERL, T., MAHMOOD, Z., PUTTINI, R., 2013. Cloud Computing: Concepts, Technology & Architecture. Prentice Hall.
- 3 MARINESCU, D.C., 2013. Cloud Computing: Theory & Practice. Elsevier.
- 4 Burke, B., 2014. RESTful Java with JAX-RS 2.0 (2nd Ed.). O'Reilly.