

Module Code	Pre-requisite Module codes	Co-Requisite Modules code(s)	ISCED Code	Subject Code	ECTS Credits	NFQ Level (CPD)#
TBD					10	7
<b>Module Title</b>	Cloud Computing					

## Cloud Computing

<b>School Responsible:</b>	School of Computing
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### Module Overview:

This module looks at the history and evolution behind cloud computing followed by a review of the latest technologies within it. This module is designed to provide the student with both a practical and theoretical understanding of existing cloud systems and their underlying technologies. The technologies focused on will include grid computing, virtualisation, distributed computing, cloud storage, security within the cloud in addition to reviewing a number of existing cloud environments.

### Learning Outcomes (LO):

On Completion of this module, the learner will be able to

<b>1</b>	Demonstrate an understanding of the fundamentals of Cloud Computing
<b>2</b>	Demonstrate an understanding of the evolution of Cloud Computing technologies
<b>3</b>	Demonstrate a practical understanding of cloud technologies within a laboratory environment.
<b>4</b>	Configure basic infrastructural components used within the cloud
<b>5</b>	Critically analyse different methods for implementing Cloud solutions

### Indicative Syllabus:

- What is cloud computing?
- Classifications of Clouds
- Evolution of Clouds
- Technologies within the cloud
- Virtualisation
- Storage and Security
- Hadoop
- Case Studies of Commercial Clouds (AZURE, Google APPS, Amazon EC2, OpenStack)

### Learning and Teaching Methods:

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This module can be delivered either through standard delivery or blended delivery.

The course delivery involves a combination of lectures and labs which may incorporate the use of blended learning techniques as appropriate throughout the delivery.

<b>Total Teaching Contact Hours</b>	39
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<b>Total Self-Directed Learning Hours</b>	148
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**Module Delivery Duration:**

This module is delivered over one semester

**Assessment**

Assessment Type	Weighting (%)	LO Assessment (No.)
Final Exam	70%	1-5
In class examination	30%	1-5

**Module Specific Assessment Arrangements (if applicable)**

(a) Derogations from General Assessment Regulations	
(b) Module Assessment Thresholds	
(c) Special Repeat Assessment Arrangements	

**Essential Reading: (author, date, title, publisher)**

- Velte/Elsenpeter 2009, Cloud Computing A Practical Approach, McGrawHill
- Rosenberg/Mateos 2010, The Cloud at your service, Manning
- Mather/Kumaraswamy/Latif Cloud Security and Privacy: An Enterprise Perspective on Risks and Compliance (Theory in Practice) 2009, O'Reilly Media
- George Reese, 2009, Cloud Application Architectures: Building Applications and Infrastructure in the Cloud, O'Reilly

<b>Version No:</b>		<b>Amended By</b>	
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Commencement Date	Associated Programme Codes

# Modules that are to be offered as Stand-Alone CPD Programmes must have an NFQ level assigned

\*Details of the assessment schedule should be contained in the student handbook for the programme stage.

**Date of Academic Council approval .....**

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