Module Definition Form (MDF)

Module code: MOD006125	**Version:** 6 **Date Amended:** 06/Dec/2023

1. Module Title
Cloud Computing

2a. Module Leader
Razvan-Ioan Dinita

2b. School
School of Computing and Information Sciences

2c. Faculty
Faculty of Science and Engineering

3a. Level
6

3b. Module Type
Standard (fine graded)

4a. Credits
15

4b. Study Hours
150

5. Restrictions

Type	Module Code	Module Name	Condition
Pre-requisite:	MOD002589	Database Design and Implementation	Compulsory
Co-requisites:	None		
Exclusions:	None		
Courses to which this module is restricted:			

LEARNING, TEACHING AND ASSESSMENT INFORMATION

6a. Module Description

Cloud computing can be considered as a model to enable ubiquitous, anywhere, any time on-demand network access to a shared pool of configurable resources including networks, storage, processors, servers, applications, and services which can be rapidly provisioned in real-time and automatically.

The topics you will study include virtualization, data centres, cloud resource management, cloud storage and popular cloud applications. Your learning will cover different backend technologies to create and run efficient clouds and a study of the way clouds are used by applications to realise computing on demand. You will be involved in practical tutorials on different cloud infrastructure technologies.

The knowledge and understanding you will obtain in this module will prepare you to meet the requirements for jobs such as a Cloud engineer/developer or a Cloud DevOps Engineer. Also, you will be able to acquire the knowledge and skills to enable you to provide consultancy services to companies who are aiming to transfer to Cloud based services and products.

6b. Outline Content

- Cloud technological platforms
- Prototyping distributed cloud/web-based applications
- Application programming/coding
- Application testing and deployment
- Cloud applications and security

6c. Key Texts/Literature

The reading list to support this module is available at: https://readinglists.aru.ac.uk/

6d. Specialist Learning Resources

Unix or Mac OS or Linux based lab machines with Internet connectivity

7. Learning Outcomes (threshold standards)		
No.	**Type**	**On successful completion of this module the student will be expected to be able to:**
1	Knowledge and Understanding	Evaluate appropriate cloud or web based distributed systems as well as associated functionalities, services and data.
2	Intellectual, practical, affective and transferrable skills	Critically analyse and assess novel solutions to problems in implementing small-scale cloud or web-based systems using realistic scenarios or real-life case studies.
3	Intellectual, practical, affective and transferrable skills	Demonstrate the ability to design and implement cloud or web based distributed application involving hands-on programming or coding.

8a. Module Occurrence to which this MDF Refers				
Year	**Occurrence**	**Period**	**Location**	**Mode of Delivery**
2025/6	ZZF	Template For Face To Face Learning Delivery		Face to Face

8b. Learning Activities for the above Module Occurrence			
Learning Activities	**Hours**	**Learning Outcomes**	**Details of Duration, frequency and other comments**
Lectures	12	1-3	1 hour lecture per week, supported by Canvas or similar.
Other teacher managed learning	12	1-3	1 hour practical session in laboratory per week. Supported by Canvas or similar.
Student managed learning	126	1-3	Supported by self-study and Canvas.
TOTAL:	150		

9. Assessment for the above Module Occurrence					
Assessment No.	**Assessment Method**	**Learning Outcomes**	**Weighting (%)**	**Fine Grade or Pass/Fail**	**Qualifying Mark (%)**
010	Coursework	1-3	100 (%)	Fine Grade	30 (%)
The implementation of a Cloud/Web-Web Based solution. Equivalent to 3000 words.					

Assessment components for Element 010				
Component No.	**Assessment Title**	**Submission Method**	**Weighting (%)**	**Components needed for Mark Calculation?**
010/1	Implementation of a coursework project and writing a project report (1500 words equivalent)	Canvas	70 (%)	All
010/2	In-class test (50 minutes)	Scheduled Activity: Timetabled assessment task	30 (%)	

In order to pass this module, students are required to achieve an overall mark of 40% (for modules at levels 3, 4, 5 and 6) or 50% (for modules at level 7*).

In addition, students are required to:
(a) achieve the qualifying mark for each element of fine graded assessment as specified above
(b) pass any pass/fail elements

[* the pass mark of 50% applies for all module occurrences from the academic year 2024/25 – see Section 3a of this MDF to check the level of the module and Section 8a of this MDF to check the academic year]