MODULE SPECIFICATION

Part 1: Information			
Module Title	Cloud Computing Platforms		
Module Code	UFCFEN-15-3	Level	Level 6
For implementation from	2019-20		
UWE Credit Rating	15	ECTS Credit Rating	7.5
Faculty	Faculty of Environment & Technology	Field	Computer Science and Creative Technologies
Department	FET Dept of Computer Sci & Creative Tech		
Module type:	Standard		
Pre-requisites	None		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description

Educational Aims: See Learning Outcomes

Outline Syllabus: Understand and explore key virtualisation technologies (e.g. terminal, thin client, hypervisors, virtualisation, paravirtualization)

Key benefits and limitations of virtualisation (e.g. cost, high availability, scalability, efficiency)

Design, setup/configure an enterprise virtualisation platform to meet a provided specification

Create and manage virtual networks (e.g. switches, VLAN, routing)

Explore industry leading cloud computing platforms and their competitive similarities and differentiation (e.g. Amazon S3, Microsoft Azure, Google Cloud Compute, Google Cloud)

Setup and manage a software as a service instance on a mainstream cloud hosting platform (see examples above)

How to assess the cyber security implication of cloud virtualisation within an organisation

Identify and be able to interpret the data security implication of introducing and/or operating cloud virtualisation within an organisation

Teaching and Learning Methods: Introductory lectures are supported by seminars, case studies, visits and practical workshops. In addition this module will be supported by interactive forums and learning tools.

150 hours study time of which 36 hours will represent scheduled learning. Scheduled learning includes lectures, seminars, tutorials, demonstration, practical classes and workshops; external visits; supervised time in studio/workshops.

Independent learning includes hours engaged with essential reading, case study preparation, assignment preparation and completion. Apprentice study time will be organised each week with a series of both essential and further readings and preparation for practical workshops. It is suggested that preparation for lectures, practical workshops, session delivery and seminars will take 7 hours per week.

Hours
36 hours scheduled learning
114 hours research, independent study and preparation for assessment work

Scheduled learning will typically include lectures, seminars, supervision, external visits and an interactive forum.

All apprentices are expected to attend a series of tutorials.

Part 3: Assessment

This module is assessed by a combination of techniques: a time controlled assessment (2 hours) and a practical portfolio.

Component A – Time Controlled Assessment (TCA) (2 Hours)
that includes the following:

Open questions exploring understanding and examples of current enterprise-ready cloud platforms from Objective A

Design/recommend a solution to a given case study using examples of enterprise ready cloud and/or virtualisation technologies

Component B – Practical Portfolio
that includes the following:

Evidence of planning and design of a cloud hosting and/or virtualisation platform

Implementation of a virtualisation and/or cloud solution to support a business scenario

Opportunities for formative assessment exist for the assessment strategy used. Verbal feedback is given and all apprentices will engage with personalised tutorials setting SMART targets as part of the programme design.

The below indicates as a percentage the total assessment of the module which constitutes a -

2 Hour TCA: Formal written exam covering Component A learning outcomes compromising of both open questions and scenarios.

Practical Portfolio/Article: Completed project/article to meet learning outcomes of component B.

Please note that this is the total of various types of assessment and will not necessarily reflect the component and module weightings in the Assessment section of this module description:

Total assessment of the module:
Controlled assessment percentage 30%
Coursework/portfolio evidence assessment percentage 70%
Total 100%

First Sit Components	**Final Assessment**	**Element weighting**	**Description**
Practical Skills Assessment - Component B		70 %	Design, build and configure a cloud computing/virtualisation solution to a given enterprise scenario
In-class test - Component A	✓	30 %	Cloud Computing/Virtualisation controlled assessment (2 Hours)
Resit Components	**Final Assessment**	**Element weighting**	**Description**
Practical Skills Assessment - Component B		70 %	Design, build and configure a cloud computing/virtualisation solution to a given enterprise scenario
In-class test - Component A	✓	30 %	Cloud Computing/Virtualisation controlled assessment (2 Hours)

Part 4: Teaching and Learning Methods

Learning Outcomes

On successful completion of this module students will achieve the following learning outcomes:

Module Learning Outcomes	**Reference**
Understand key virtualisation methods.	MO1
Describe the benefits and key features of virtualisation.	MO2
Design, set up and configure an enterprise virtualisation platform.	MO3
Provision and manage a variety of virtual client operating systems.	MO4
Create and manage virtual networks.	MO5
Understand industry leading cloud computing platforms and their similarities and differences.	MO6
Set up and manage a software-as-a-service instance on a mainstream cloud hosting platform.	MO7
Discuss the implication to an organisation in maintaining effective cyber security within virtual network environments.	MO8
Conduct a range of cyber security audit activities to demonstrate security control effectiveness.	MO9
Discuss the associated data security and management implications of virtualisation within an organisation.	MO10
Perform routine statistical analyses and ad-hoc queries.	MO11

Contact Hours

Independent Study Hours:

Independent study/self-guided study	114
Total Independent Study Hours:	114

	Scheduled Learning and Teaching Hours:	
	Face-to-face learning	36
	Total Scheduled Learning and Teaching Hours:	36
	Hours to be allocated	150
	Allocated Hours	150
Reading List	*The reading list for this module can be accessed via the following link:* https://uwe.rl.talis.com/index.html	

Part 5: Contributes Towards
This module contributes towards the following programmes of study: