



MODULE SPECIFICATION

Part 1: Information			
Module Title	Network Infrastructure		
Module Code	UFCFYQ-30-1	Level	Level 4
For implementation from	2019-20		
UWE Credit Rating	30	ECTS Credit Rating	15
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
<p>Educational Aims: A networking administrator must understand basic computer system organisation and network infrastructures, with an overall focus on the services and capabilities that network infrastructure solutions enable in an organisational context.</p> <p>Outline Syllabus: Overview of computer architecture and functions that includes; CPU, memory, instruction cycle, I/O, interrupts and peripheral devices</p> <p>The fundamental building blocks e.g. routers, switches, hubs, storage, transmission</p> <p>Basic network device configuration</p> <p>Typical architectures of computer networks and the Internet e.g. server/client, hub/spoke and peer to peer</p> <p>Network types (LAN, WAN, MAN, WLAN)</p> <p>Binary fundamentals</p> <p>IP Addressing and Subnet addressing</p>

STUDENT AND ACADEMIC SERVICES

OSI Model

Different transport layer protocols (TCP and UDP)

Network Monitoring (SNMP) and some of main factors that affect network performance e.g. bandwidth, propagation delay, transmission delay

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.

Part 3: Assessment

This module is assessed by a combination of techniques: an examination, practical portfolio and a time constrained assessment.

In-class Test (includes the following):

An in-class test to be set up in a controlled lab envired to complete administrative network tasks, for example:

Apply basic network configurations for certain network devices

Use CLI commands to retrieve network information

Configure basic IP addresses on a network device

Configure a DHCP for a domain

Report (includes the following):

Evidence of planning and design of a network to support a business scenario

Implementation of a simulated network to support a business scenario

1 Hour Closed Book Exam

Learners will need to undertake a 1 hour unseen exam based on network fundamentals. This exam will be multiple choice and included questions based on:

The fundamental network building blocks

Network types

Computer architecture

Network protocols

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

First Sit Components	Final Assessment	Element weighting	Description
Report - Component B	✓	40 %	Report - Design, simulate and document a network solution (1000 words)
In-class test - Component A		30 %	In-Class Test (2 Hours)
Examination - Component A		30 %	Exam (1 Hour)
Resit Components	Final Assessment	Element weighting	Description
Report - Component B	✓	40 %	Report - Design, simulate and document a network solution (1000 words)
In-class test - Component A		30 %	In-Class Test (2 Hours)
Examination - Component A		30 %	Exam (1 Hour)

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Part 4: Teaching and Learning Methods																	
Learning Outcomes	<p>On successful completion of this module students will achieve the following learning outcomes:</p> <table border="1"> <thead> <tr> <th style="text-align: left;">Module Learning Outcomes</th> <th style="text-align: left;">Reference</th> </tr> </thead> <tbody> <tr> <td>Identify and explain the fundamental building blocks of computer networking</td> <td>MO1</td> </tr> <tr> <td>Show an understanding of network types, computer architecture and network protocols</td> <td>MO2</td> </tr> <tr> <td>Apply basic network configurations for network devices using the CLI</td> <td>MO3</td> </tr> <tr> <td>Configure both IP addresses and a DHCP for a domain</td> <td>MO4</td> </tr> <tr> <td>Plan and design a network solution to support a business scenario.</td> <td>MO5</td> </tr> <tr> <td>Implement and test a network solution to support a business scenario.</td> <td>MO6</td> </tr> </tbody> </table>	Module Learning Outcomes	Reference	Identify and explain the fundamental building blocks of computer networking	MO1	Show an understanding of network types, computer architecture and network protocols	MO2	Apply basic network configurations for network devices using the CLI	MO3	Configure both IP addresses and a DHCP for a domain	MO4	Plan and design a network solution to support a business scenario.	MO5	Implement and test a network solution to support a business scenario.	MO6		
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Reading List	<p><i>The reading list for this module can be accessed via the following link:</i></p> <p>https://uwe.rl.talis.com/index.html</p>																

Part 5: Contributes Towards

This module contributes towards the following programmes of study: