



MODULE SPECIFICATION

Part 1: Information			
Module Title	Network Infrastructure		
Module Code	UFCFYQ-30-1	Level	Level 4
For implementation from	2020-21		
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>Overview: This module introduces the basic features of networks and their administration.</p> <p>Educational Aims: This module will enable you to 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, thus preparing you for a role as network administrator.</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>

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IP Addressing and Subnet addressing

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 covering the fundamentals and technical underpinning of the module for the first assessment before progressing onto practical delivery through a series of lessons, workshops and practical tasks in a Network Lab to develop the tools and techniques required to complete the practical assessment for this module.

Part 3: Assessment

This module has two assessments, designed to assess student's theoretical knowledge and practical application of network infrastructure topologies. The network infrastructure report will demonstrate students understanding of the fundamentals of network infrastructure and the theories and principles of secure network design.

The second assessment is a 2 hour Time Constrained Assessment (TCA) completed in a Network Lab with access to specialist equipment and network infrastructure under exam conditions. Students will be required to set up a network to meet a given specification within the given timeframe.

Tutor-lead formative feedback will be available throughout the module.

First Sit Components	Final Assessment	Element weighting	Description
Practical Skills Assessment - Component A	✓	40 %	Practical Exam (1 Hour) Lab-based
Report - Component B		60 %	Report - Design, simulate and document a network solution (2000 words)
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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>Apply basic network configurations for network devices using the Command Line Interface</td> <td>MO1</td> </tr> <tr> <td>Configure both IP addresses and a DHCP for a domain</td> <td>MO2</td> </tr> <tr> <td>Plan, design, implement and test a network solution.</td> <td>MO3</td> </tr> <tr> <td>Identify and explain the fundamental building blocks of computer networking</td> <td>MO4</td> </tr> </tbody> </table>	Module Learning Outcomes	Reference	Apply basic network configurations for network devices using the Command Line Interface	MO1	Configure both IP addresses and a DHCP for a domain	MO2	Plan, design, implement and test a network solution.	MO3	Identify and explain the fundamental building blocks of computer networking	MO4						
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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://rl.talis.com/3/uwe/lists/C17AE399-53C0-7631-69B3-8506DEC367C4.html</p>																

Part 5: Contributes Towards	
<p>This module contributes towards the following programmes of study:</p> <p>Applied Computing[Sep][FT][UCW][3yrs] BSc (Hons) 2020-21</p> <p>Applied Computing [Sep][PT][UCW][3yrs] FdSc 2019-20</p>	