

Module Code	Pre-requisite Module codes	Co-Requisite Modules code(s)	ISCED Code	Subject Code	ECTS Credits	NFQ Level (CPD)#
TBD	CMPU2002				10	7
Module Title	Systems Administration					

Systems Administration

School Responsible:	School of Computing
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Module Overview:

The aim of this module is to provide students with the required knowledge and skills to become successful system administrators in a networked environment.

Learning Outcomes (LO):

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

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| 1 | Demonstrate an understanding of the services, structures and techniques necessary for systems administration in both small scale and enterprise wide infrastructures |
| 2 | Plan, install, configure, manage, maintain and secure Windows and Linux based Servers. |
| 3 | Use common tools and techniques to complete routine tasks in core administrative areas |
| 4 | Troubleshoot various servers, clients and services. |

Indicative Syllabus:

Systems Administration Services

Introduction to Systems Administration Services. Client/Server communications.

Installation, Upgrading and Deploying Windows and Linux Based Servers.

Planning, installation, configuration and upgrades of servers. Deploying servers across a network. Client installation, configuration and connectivity. Troubleshooting.

Infrastructure Service Planning

Planning IP4 and IP6 addressing. Installation and configuration of DHCP service; Planning, installation and configuration of DNS.

File and Print Services

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Planning, implementing, managing and troubleshooting File Services. Providing Home and Shared Folder access across a network and troubleshooting access control problems. Planning, implementing and managing Print Services across the network.

Web Services

Plan, install, configure and deploy Web Services (IIS and Apache). Client connectivity and troubleshooting.

Remote Access and Network Access Protection

Planning and managing remote access. VPN Authentication; VPN protocols; Firewalls and NAP.

Clustering and High Availability

Discussion of DNS Round robin and Network Load Balancing. Availability Strategies. Clustering concepts. Installation and Failover Clustering.

Security Policy Planning

Security policies; update and patch management.

Learning and Teaching Methods:

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

Total Teaching Contact Hours

39

Total Self-Directed Learning Hours

148

Module Delivery Duration:

This module will be delivered over 1 semester

Assessment

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Assessment Type	Weighting (%)	LO Assessment (No.)
In class examination	100	1-4
Module Specific Assessment Arrangements (if applicable)		
(a) Derogations from General Assessment Regulations		
(b) Module Assessment Thresholds		
(c) Special Repeat Assessment Arrangements		

Essential Reading:

William Stanek (2016) Windows Server 2016: Installing & Configuring, Stanek & Associates

William Stanek (2016) Windows Server 2016: Essentials for Administration, CreateSpace Independent Publishing Platform

John Krause (2016) Mastering Windows Server 2016, Packt Publishing

Tom Carpenter (2011) Windows Server Administration Essentials

Brian Desmond (2013) Active Directory: Designing, Deploying and Running Active Directory, O'Reilly Media

Version No:		Amended By	
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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