ZNTW C1201: Networking 1

Module Title:	Networking 1
Language of Instruction:	English

Credits:	5

NFQ Level:	6

Module Delivered In	8 programme(s)

Teaching & Learning Strategies:	Combination of lectures and practical laboratory sessions. Lectures will take the form of traditional theory and tutorials. Laboratory sessions take the form of individual & group work.

Module Aim:	To provide the student with: 1. the skills necessary to build Local Area Networks. 2. an understanding of networking concepts. 3. the capability to understand how data is transferred across Ethernet networks.

Learning Outcomes	
On successful completion of this module the learner should be able to:	
LO1	Describe the hardware, software, and services that comprise a Local Area Network, and be able to articulate how these components integrate to form a network solution
LO2	Demonstrate expertise in configuring network end devices and network switches to construct Local Area Networks (LANs)
LO3	Explain key networking protocols, and their hierarchical relationship in the context of a conceptual model, such as the OSI and TCP/IP framework

Pre-requisite learning
Module Recommendations *This is prior learning (or a practical skill) that is recommended before enrolment in this module.*
No recommendations listed
Incompatible Modules *These are modules which have learning outcomes that are too similar to the learning outcomes of this module.*
No incompatible modules listed
Co-requisite Modules
No Co-requisite modules listed
Requirements *This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.*
No requirements listed

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Module Content & Assessment

Indicative Content
Introduction to Computer Networks Network devices, types of networks, Internet
Basic Switch and End Device Configuration Initial configuration of switches and the end devices connected to them in LANs
Protocols and Models Introduction to common networking protocols and the OSI 7 Layer networking model and the TCP/IP networking model
OSI Lower Layers Physical, Data Link, and Network Layers
Ethernet Switching Switch operation in Ethernet LANs
Address Resolution Protocol (ARP) Role of ARP in Ethernet networks

Assessment Breakdown	%
Continuous Assessment	100.00%

Continuous Assessment

Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Other	Two practical examinations to assess the student's knowledge of basic switch and end device configuration and their ability to build simple local area networks.	2	40.00	n/a
Other	The students will be given two online tests to assess their knowledge of Local Area Networks and Layer 2 switch operations	1,3	20.00	n/a
Examination	The students will be given a written test to assess their knowledge of Protocols and Network Models, the operation of the Data Link and Physical Layers and the use of ARP in networking	3	20.00	n/a
Practical/Skills Evaluation	Weekly practical/laboratory work is designed to allow students to demonstrate the achievement of the learning outcomes	1,2	20.00	n/a

No Project

No Practical

No End of Module Formal Examination

SETU Carlow Campus reserves the right to alter the nature and timings of assessment

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Module Workload

Workload: Full Time		
Workload Type	*Frequency*	*Average Weekly Learner Workload*
Lecture	12 Weeks per Stage	1.00
Laboratory	12 Weeks per Stage	2.00
Estimated Learner Hours	15 Weeks per Stage	5.13
Tutorial	12 Weeks per Stage	1.00
	Total Hours	125.00

Module Delivered In

Programme Code	Programme	Semester	Delivery
CW_KWCCD_B	Bachelor of Science (Honours) in Creative Computing and Digital Innovation	1	Mandatory
CW_KCCYB_B	Bachelor of Science (Honours) in Cyber Crime and IT Security	1	Mandatory
CW_KCCIT_B	Bachelor of Science (Honours) in Information Technology Management	1	Mandatory
CW_KCSOF_B	Bachelor of Science (Honours) in Software Development	1	Mandatory
CW_KCCYB_D	Bachelor of Science in Cybercrime and IT Security	1	Mandatory
CW_KCCSY_D	Bachelor of Science in Information Technology Management	1	Mandatory
CW_KCSOF_D	Bachelor of Science in Software Development	1	Mandatory
CW_KCCOM_C	Higher Certificate in Science in Computing Programming	1	Mandatory