ZNTW H2201: Networking II

Module Title:	Networking II
Language of Instruction:	English

Credits:	10

NFQ Level:	6

Module Delivered In	1 programme(s)

Teaching & Learning Strategies:	A mix of traditional lectures, laboratory work and take-home projects will enable the learner to fully understand and practice the various networking concepts presented.

Module Aim:	To provide learners with an appreciation of the function and characteristics of protocols and services at various layers of established networking models.

Learning Outcomes	
On successful completion of this module the learner should be able to:	
LO1	Analysis both IPv4 and IPv6 address allocations and formulate appropriate addressing schemes for an internetwork.
LO2	Divide a network using IPv4 and IPv6 subnetting techniques to optimise network performance and meet user requirements.
LO3	Distinguish between static, default and dynamic routing.
LO4	Develop and verify basic router and switch configurations in accordance with requirements
LO5	Plan and deploy Virtual Local Area Networks (VLANs)

Pre-requisite learning		
Module Recommendations *This is prior learning (or a practical skill) that is recommended before enrolment in this module.*		
7950		Networking I
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
Internet Protocol (30%): IPv4, IPv6, subnetting, CIDR, VLSM
Static Routing (15%): Route types, static routing (e.g. static, default, summary and floating)
Dynamic Routing (25%): Routing protocol types (e.g. distance vector and link state), Investigation of dynamic routing protocols (e.g. RIPv2, RIPng, OSPFv2, OSPFv3), Analysing routing tables
LAN Switching (30%): Ethernet, Switching Concepts, VLAN design and configuration, Inter-VLAN routing

Assessment Breakdown	%
Continuous Assessment	20.00%
Practical	30.00%
End of Module Formal Examination	50.00%

Continuous Assessment

Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Examination	n/a	1,2	10.00	Week 6
Examination	n/a	3,4,5	10.00	Week 26

No Project

Practical

Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Practical/Skills Evaluation	Weekly practical/laboratory work is designed to allow students to demonstrate the achievement of all the learning outcomes.	1,2,3,4,5	15.00	n/a
Practical/Skills Evaluation	Practical Examination	1,2,3,4,5	15.00	Sem 2 End

End of Module Formal Examination

Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Formal Exam	n/a	1,2,3,4,5	50.00	End-of-Semester

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	Every Week	2.00
Laboratory	Every Week	2.00
Estimated Learner Hours	Every Week	2.66
	Total Hours	6.66

Module Delivered In

Programme Code	Programme	Semester	Delivery
CW_KWCAP_C	Higher Certificate in Computing	2	Mandatory