ZNTW H3201: Networking III

Module Title:	Networking III
Language of Instruction:	English

Credits:	10

NFQ Level:	7

Module Delivered In	No Programmes

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 development the learners understanding of the function and characteristics of protocols and services at various layers of establish networking models.

Learning Outcomes	
On successful completion of this module the learner should be able to:	
LO1	Consider and explain the function and operations of IP services
LO2	Select and configure appropriate technologies and protocols for LAN interconnection and remote access
LO3	Install, configure and evaluate Virtual Private Networks (VPNs)
LO4	Appreciate emerging and disruptive technologies

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
IP Services (40%): Configure and verify IP addresses using address assignment technologies (e.g. DHCP), Analysis, specify and apply Access Control Lists (ACLs)(e.g. named ACLs, numbered ACLs, standard ACLs, extended ACLs), Design, configure and verify Network Address Translation (NAT) for a given network (e.g. Static NAT, Dynamic NAT, PAT)
WAN technologies and protocols (30%): Examine access network and core network function and technologies (e.g. DSL, PON, HFC, Ethernet and MPLS)
Virtual Private Networks (20%): VPNs, site-to-site GRE tunnels, IPsec, remote access VPNs.
Emerging Technologies (10%): Consider the direction of wireless, access and core networks (e.g. Future internet and Software Defined Networks (SDN))

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 9
Examination	n/a	3,4	10.00	Week 19

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	15.00	Every Week
Practical/Skills Evaluation	Laboratory Examination	1,2,3,4	15.00	Week 19

End of Module Formal Examination

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