

ZSYS H2201: Secure Systems Administration

Module Title:			Secure Systems Administration		
Credits: 10		10			
NFQ Level:		6			
Module Delivered In 1 programme(s)					
Teaching & Learning Strategies:			As well as traditional lectures learners will undertake various laboratory exercises. Learners will be expected to actively participate in class on the materials covered and work throughout each scheduled lab session to accomplish assigned tasks.		
Module Aim:			To provide learners with a theoretical knowledge and practical skills required for deploying and administering IT systems securely.		
Learning Ou	itcomes				
On successf	ul completio	n of th	is module the learner should be able to:		
LO1	Identify and diagnose problems on various computing platforms				
LO2	Demonstrate practical and theoretical knowledge in managing/administering IT networked systems and services securely.				
LO3	Understand and implement a DNS, DHCP and Web servers.				
LO4	Analyse and understand the security effects of network implementations.				
LO5	D5 Investigate and employ network monitoring and analysis tools				
LO6	Understan	d the	role of regulation such as GDPR		
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

Workstation administration

Operating system installation and configuration; Installing hardware peripherals and corresponding drivers

Network administration:

Setup and sharing of device servers; installing application software; backup systems; system start-up and shutdown; system crash recovery; network services, DHCP, DNS, proxy, firewall, DMZ, monitoring and analysis network activity.

System security and monitoring Virus protection; password and user authentication systems; process management; connection recording; encryption digital signatures and DDoS attack and mitigation strategies.

General administration activities

Setting up a company environment; adding, deleting and configuring objects and users. Implement file system repair; incremental backups, network and BYOD policy documentation, Security considerations migrating to the cloud. Scripting and automation of tasks,

Web-server configuration

Web-server installation, secure configuration and testing.

General Data Protection Regulation (GDPR) How General Data Protection Regulation (GDPR) applies to Secure System Administration

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

Continuous Assessment				
Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Examination	Assessment on semester 1 content.	1,2,3	10.00	Sem 1 End
Examination	Assessment on semester 2 content.	4,5,6	10.00	Sem 2 End

Project				
Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Project	Students will setup, configure and administer a network environment for an organisation.	2,3,4	15.00	Sem 1 End
Project	The student will prepare a report on an topic relating to IT systems security.	1,4,5	15.00	Sem 2 End

No Practical

End of Module Formal Examination				
Assessment Type	Assessment Description	Outcome addressed	% of total	Assessment Date
Formal Exam	The terminal exam will be a 3 hour written test	1,2,3,4,5,6	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	30 Weeks per Stage	2.00	
Laboratory	30 Weeks per Stage	2.00	
Estimated Learner Hours	30 Weeks per Stage	3.33	
	Total Hours	220.00	

Module Delivered In					
Programme Code	Programme	Semester	Delivery		
CW_KWCAP_C	Higher Certificate in Computing	2	Mandatory		