Module Title:	Secure Systems Administration

Credits:	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 Outcomes
On successful completion of this 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	Investigate and employ network monitoring and analysis tools
LO6	Understand 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

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

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

Programme Code	Programme	Semester	Delivery