Networking and Security

Module Information

2022.01, Approved

Summary Information

Module Code	4543NCCG
Formal Module Title	Networking and Security
Owning School	Computer Science and Mathematics
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 4
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

Partner Teaching Institution

Institution Name
Nelson and Colne College Group

Learning Methods

Learning Method Type	Hours
Lecture	60

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
JAN-PAR	PAR	January	12 Weeks
SEP-PAR	PAR	September	12 Weeks

SEP_NS-PAR	PAR	September (Non-standard start date)	12 Weeks

Aims and Outcomes

Aims	This module introduces students to the design and implementation of networks and to the security issues they raise.

After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Examine networking principles, their protocols, network devices and operations
MLO2	2	Design and Implement efficient networked systems and diagnose faults in networked systems
MLO3	3	Describe risks to IT security and propose solutions.
MLO4	4	Review mechanisms to control and manage organisational IT security.

Module Content

Outline Syllabus	Role of networks. System types: Peer-based, client-server, cloud, cluster, centralised, virtualised. Representative selection of networking standards Networking devices, Networking softwareHardware requirements, Bandwidth requirements. Users: Quality expectations, concept of system growth. Networking services and applications. Selection of components.Implementation and diagnosis of networked systems. Installation of and configuration of devices. Verification of configuration and connectivity. System monitoringRisks to IT securityIT security solution evaluationRisk assessment: change management, audit control, business continuance/disaster recovery plans, loss of data/business, intellectual property, hardware and software; probability of occurrence; staff responsibilities; Data law. Company regulationsIntroduction to organisational security policies. Controlling security risk assessments and compliance with security procedures and standardsSecurity: tools; software to train and update staff; auditing tools; security audits; penetration testing; ethical hacking; gathering and recording information on security; initiating suitable actions for remediation.
Module Overview	
Additional Information	

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Report	Assignment	100	0	MLO1, MLO3, MLO4
Competency	NCC Group Pass/Fail			MLO2

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Bob Askwith	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings