

Wireless Networks

Module Information

2022.01, Approved

Summary Information

Module Code	7552WCSST
Formal Module Title	Wireless Networks
Owning School	Engineering
Career	Postgraduate Taught
Credits	20
Academic level	FHEQ Level 7
Grading Schema	50

Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

Partner Teaching Institution

Institution Name
Sri Lanka Technological Campus

Learning Methods

Learning Method Type	Hours
Lecture	22
Practical	11
Tutorial	11

Module Offering(s)

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

Aims and Outcomes

Aims	To develop an extensive knowledge of network architectures and the protocols which are used therein.
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After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Model and critically evaluate complex network scenarios
MLO2	2	Critically evaluate aspects of network architecture and design
MLO3	3	Analyse complex network performance issues

Module Content

Outline Syllabus	Introduction: applications of networks, network functions, protocols and layering, network architectures, layer models, circuit and packet switching. Physical and data link layers; protocols and functionality, Medium Access Control (MAC), Local Area Networking, e.g. Ethernet. User applications: Performance requirements – Bandwidth, Errors, Delay, JitterQoS implementations - DiffServ, IntServ, MPLSMultiple Access – Random, Reservation, Polling, Tokens Network Routing – Static, dynamic, DVP, LSPNetwork Management – FCAPS; MIBs, SNMP, ArchitectureSecurity – Confidentiality, Integrity, Availability. Wide Area and Access Networks – e.g. ADSL, SDH Internet – Architecture, IP, UDP, TCP, Internet application layers, Mobile Networks – Architecture, capacity, protocols, function distribution e.g. 3G/4G/5G
Module Overview	
Additional Information	This module provides the student with an extensive knowledge of the concepts of networks, protocols and the environments in which they operate. United Nations Sustainable Development Goals: 4. Quality Education 11. Sustainable Cities and Communities 12. Responsible Consumption and Production

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Exam	Exam	70	2	MLO2, MLO3
Report	Model and evaluate network	30	0	MLO1

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Ronan McMahon	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings
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