

Networks and Streaming

Module Information

2022.01, Approved

Summary Information

Module Code	5208AMP
Formal Module Title	Networks and Streaming
Owning School	Engineering
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 5
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
Engineering

Learning Methods

Learning Method Type	Hours
Lecture	22
Practical	22

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
SEP-CTY	CTY	September	12 Weeks

Aims and Outcomes

Aims	The module introduces the students to data networking hardware and software and to streaming using such tools.
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After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Identify and evaluate the network and streaming related components within industry environment.
MLO2	2	Discuss the impact of various networking related issues on streaming performance.

Module Content

Outline Syllabus	Multimedia content – audio, video; Encoders; file types; formats; Quality implications Streaming of live and recorded material; downloading; Buffering & caching; lost data; Broadcast, multicast, unicast Media Distribution Software; Streaming software Network architectures and protocols Networks– servers, clients, switches, routers and network application servers; Network links – radio, fibre, copper Packet vs Circuit switching Signals, noise and interference; transmit and receive signal strength Data volumes, bandwidth, production, consumption, bits, bytes, words, packets Quality in networks: bandwidth, delay, errors, jitter; storage and network capacity Local area networks, Wide area networks, Internet, Ethernet, IP, TCP, UDP, streaming protocols, DNS, security, authentication, access, authorisation.
Module Overview	
Additional Information	The module covers files and file types which are used to distribute multimedia content. It looks at the network architectures available, and how they may affect the delivery of multimedia content. Choice of protocol and the quality of multimedia content are related. Some capacity analysis and its impact on file type and content packaging are discussed.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Portfolio	A number of short tests	40	0	MLO1
Portfolio	Streaming and Viva	60	0	MLO2

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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