

# Internet of Things

## Module Information

2022.01, Approved

### Summary Information

Module Code	5175CSD
Formal Module Title	Internet of Things
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	44

### Module Offering(s)

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

### Aims and Outcomes

Aims	Modern smart devices rely on the use of cloud technology for data storage and security and app availability that is automatically updated without any intervention on our part. Couple the cloud to everyday objects at the office or around the home results in an enormously powerful environment that can be controlled and efficiently managed whenever and wherever required. This module aims to provide us with the knowledge and skills to take the best benefits from such technology.
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**After completing the module the student should be able to:**

**Learning Outcomes**

Code	Number	Description
MLO1	1	Apply deeper knowledge of more advanced programming techniques to the smart environment.
MLO2	2	Apply more advanced techniques to applications for complex remote and mobile systems.
MLO3	3	Write effective and comprehensive design and end-user documentation.

**Module Content**

Outline Syllabus	Internet of Things - understanding IoT Network hardware – hubs, switches MAC addressing, IPv4, IPv6. Internet Connectivity – TCP/IP, SMS, MQTT Message Brokering – Mosquitto. IOT – technology, protocols, security issues.
Module Overview	
Additional Information	The module provides the student with a practical software and hardware-based design activity.

**Assessments**

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

**Module Contacts**

**Module Leader**

Contact Name	Applies to all offerings	Offerings
Magomed Muradov	Yes	N/A

**Partner Module Team**

Contact Name	Applies to all offerings	Offerings