

Liverpool John Moores University

Title: Mobile Devices & Wireless Technology
Status: Definitive
Code: **5171CSD** (125569)
Version Start Date: 01-08-2021

Owning School/Faculty: Engineering
Teaching School/Faculty: Engineering

Team	Leader
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Academic Level: FHEQ5 **Credit Value:** 20 **Total Delivered Hours:** 36
Total Learning Hours: 200 **Private Study:** 164

Delivery Options

Course typically offered: Semester 1

Component	Contact Hours
Lecture	16
Practical	12
Tutorial	8

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	ASS 1	2,500 word report	70	
Technology	ASS 2	2,000 word lab report	30	

Aims

The modern world is a connected world. One where people can interact and expect to control and manage their lives remotely, wherever they may be. Smartphones and other tablet computers have driven that need to shop, bank, control the home environment, stream music and TV programmes and other limitless application, at a

time when you want to. This module will explore those mobile devices and the wireless communications technologies that enable it all to happen.

Learning Outcomes

After completing the module the student should be able to:

- 1 Demonstrate a clear understanding of various wireless technologies used in everyday activities, in terms of their technical specifications and boundaries, performance limitations and methods of evaluation.
- 2 Design wireless hardware solutions for a given practical problem.
- 3 Create a wireless embedded solution and critically evaluate performance metrics.

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Report	1	2	3
Lab	1	2	3

Outline Syllabus

Radio Technologies:

802.15.4, 802.11, bluetooth and other proprietary systems.

Hardware Platforms:

Module selection, driver development.

Software:

Simulation and analysis.

Data and information security.

Learning Activities

A series of structured lectures, tutorials and practical tasks will provide a varied range of learning activities.

Notes

This module explores the wireless technologies, hardware implementations and simulation of smart solutions.