

Summary Information

Module Code	7530ESIST
Formal Module Title	Embedded Systems
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 provide both the theoretical and practical skills in the design and development of advanced embedded systems.
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After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Design and implement complex integrated hardware and software solutions to engineering problems
MLO2	2	Critically compare and contrast the suitability to specific engineering applications of microprocessor hardware
MLO3	3	Critically evaluate the use of real-time operating systems.
MLO4	4	Critically analyse the security implications of embedded applications

Module Content

Outline Syllabus	Development Lifecycle: Design, Development, Testing, Maintenance. Flow Charts, Pseudo code Microprocessor Hardware: Functionality, capability, performance, energy considerations RTOS: Functionality, Security, Driver support, execution time, Security: CIA, Threats, protection, Maintenance/Updates, overheads SCADA. Interconnections & interfaces Networking
Module Overview	
Additional Information	This module will provide students with the capability to design and develop an embedded solution to an engineering problem. United Nations Sustainable Development Goals: 4. Quality Education 9. Industry, Innovation and Infrastructure

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Exam	Examination	70	2	MLO2, MLO3, MLO4
Practice	Laboratory demo and report	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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