

Summary Information

Module Code	7541SDMST
Formal Module Title	Sensors Networks and Data
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	22

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 understanding of ad hoc and sensor networking concepts, protocol design, and coding techniques.
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After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Demonstrate a comprehensive understanding of the concepts, opportunities and issues surrounding Wireless Sensor Networks.
MLO2	2	Evaluate various protocols, traffic, propagation models and access techniques using analytical methods and modelling techniques.
MLO3	3	Apply mathematical and data analytic techniques, and computer-based models for solving complex problems and to assess sensor networks.
MLO4	4	Design, implement and critically evaluate a practical solution that uses wireless networks and the data generated for a given engineering problem.

Module Content

Outline Syllabus	Wireless Sensor Networks: Introduction, topologies, protocols and platforms. Radio Technologies: 802.15.4, 802.11, Bluetooth, WiFi and other proprietary systems. Deployment, energy considerations and data from sensor network to influence its behaviour and the outcome. Modelling tools and simulation techniques to explore and address limitation and issues in sensor networks
Module Overview	
Additional Information	This module encourages development of theoretical understanding and practical experience in wireless and sensor networks. United Nations Sustainable Development Goals: 4. Quality Education. 5. Gender Equality. 8. Decent Work and Economic Growth. 9. Industry, Innovation and Infrastructure. 10. Reduced Inequalities

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Exam	Exam	70	2	MLO1, MLO2, MLO3
Report	Demonstration and report	30	0	MLO3, MLO4

Module Contacts