Liverpool John Moores University

Title:	Wireless Networks
Status:	Definitive
Code:	**7068ENG** (119381)
Version Start Date:	01-08-2016
Owning School/Faculty:	Electronics and Electrical Engineering
Teaching School/Faculty:	Electronics and Electrical Engineering

Team	Leader
Princy Johnson	Y

Academic Level:	FHEQ7	**Credit Value:**	15	**Total Delivered Hours:**	38
Total Learning Hours:	150	**Private Study:**	112		

Delivery Options
Course typically offered: Semester 2

Component	Contact Hours
Lecture	30
Practical	6

Grading Basis: 50 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1		50	2
Essay	AS2		20	
Essay	AS3		30	

Aims

To introduce fundamental concepts and the state of the art in wireless sensor networks.

Learning Outcomes

After completing the module the student should be able to:

1	Demonstrate a comprehensive understanding of an overview of the concepts, principles, evolution, opportunities and issues surrounding the Wireless Ad hoc and Sensor Networks
2	Identify the differences in the protocol stack, operational features and application strategies between the two types of Networks
3	Identify, classify and describe traffic, propagation models, and access techniques in Wireless networks through the use of analytical methods and modelling techniques for Ad hoc and Sensor Networks
4	Apply mathematical and computer-based models for solving problems and to assess the limitations of Ad hoc and Sensor Networks
5	Extract data pertinent to network issues and apply in appropriate solutions using computer based engineering tools

Learning Outcomes of Assessments

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

Examination	1	2	3
Assignment	4	5	
Case Study	3	4	5

Outline Syllabus

Introduction & overview of wireless Ad hoc and Sensor Networks; Protocol stack for Ad hoc and Sensor Networks; Topology, Routing and Communication techniques in Ad hoc and Sensor Networks; Modelling tools and simulation techniques to explore and address limitation and issues; applications and case studies.

Learning Activities

This module will be delivered through a combination of formal lectures,practicals and assignments.

Notes

The module will introduce students to fundamental concepts and the state of the art in wireless sensor networks.