Liverpool John Moores University

Title:	Embedded Systems
Status:	Definitive
Code:	**6103ENG** (116943)
Version Start Date:	01-08-2016
Owning School/Faculty:	Electronics and Electrical Engineering
Teaching School/Faculty:	Electronics and Electrical Engineering

Team	Leader
Ronan McMahon	Y

Academic Level:	FHEQ6	**Credit Value:**	20	**Total Delivered Hours:**	72
Total Learning Hours:	200	**Private Study:**	128		

Delivery Options
Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	22
Practical	24
Seminar	24

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	Exam		40	2
Technology	Coursewk 1		30	
Technology	Coursewk 2		30	

Aims

To develop knowledge and understanding of embedded systems.

Learning Outcomes

After completing the module the student should be able to:

1	Design simple integrated hardware and software solutions to engineering problems
2	Develop suitable C programme within the limitations of a selected Embedded platform
3	Test and Analyse a simple Embedded system solution
4	Compare/contrast the basic attributes of hardware platforms for particular engineering problems

Learning Outcomes of Assessments

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

Exam	1	3	4	
Coursework 1	1	2	3	
Coursework 2	1	2	3	4

Outline Syllabus

Embedded Systems Introduction: compare with microprocessors and other computing systems. Typical Applications
High level language constructs: variables, conditional statements, loops, string handling, input-output, data structures, classes, inheritance, file handling, functions, operating systems interfacing.
Hardware Platforms: Characteristics of different platforms. CISC, RISC,

Learning Activities

Series of Lectures, tutorials, seminars and practical classes.

Notes

The module develops Embedded Systems as a separate thread from microprocessors. The focus is on developing integrated solutions in a limited environment. This involves limitations on the available resources – memory, processor capacity & speed, I/O etc.