Liverpool John Moores University

Title: Introduction to Embedded Control
Status: Definitive
Code: **4055ENG**   (119781)
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:	FHEQ4	**Credit Value:**	20	**Total Delivered Hours:**	54
Total Learning Hours:	200	**Private Study:**	146		

Delivery Options
Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	20
Practical	30
Seminar	2

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Technology	Pratical	Production and demonstration of Simple Application	50	
Exam	Exam	Investigation of Current Applications	50	2

Aims

To gain an understanding of the basic principles and structures of a range of Embedded Processors and investigate the implementation of a basic application.

Learning Outcomes

After completing the module the student should be able to:

1   Discuss the architectures of typical microprocessors and microcontrollers.
2   Develop a program for an Embedded Processor to implement a simple system and demonstrate.
3   Design simple circuits that incorporate embedded processor to solve a simple task.
4   Discuss the use of Embedded Processors including their wireless applications in current technology context.

Learning Outcomes of Assessments

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

Simple Application   2   3

Exam   1   4

Outline Syllabus

Microcontroller and Microprocessor Architectures.
Programming microcontrollers to complete basic automated tasks.
Data transfer techniques for interfacing with peripheral devices.
Current Industrial and non-Industrial applications that incorporate embedded processors.
Microcontrollers in Wireless applications.

Learning Activities

Lecture and demonstration and practical activities applying topics discussed.

Notes

This module introduces the use of Embedded Processors in modern electronic equipment.