Liverpool John Moores University

Title:	MICROPROCESSOR SYSTEMS
Status:	Definitive
Code:	**5509TECSBC** (113897)
Version Start Date:	01-08-2016
Owning School/Faculty:	Maritime and Mechanical Engineering
Teaching School/Faculty:	The Sino-British College

Team	Leader
Russell English	Y

Academic Level:	FHEQ5	**Credit Value:**	12	**Total Delivered Hours:**	37
Total Learning Hours:	120	**Private Study:**	83		

Delivery Options
Course typically offered: Semester 1

Component	Contact Hours
Lecture	20
Practical	5
Tutorial	10

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1	Examination	60	2
Essay	AS2	Coursework	40	

Aims

The module aims to broaden the students' knowledge and understanding of microprocessor based-systems and the techniques and methods used for interfacing with them.

Learning Outcomes

After completing the module the student should be able to:

1 Describe the fundamental components of a microprocessor based system, a typical architecture and associated instruction set.
2 Design and analyse a microprocessor based memory subsystem.
3 Design and analyse microprocessor based I/O interfacing and data transfer.
4 Design and interface a suitable display system for an embedded microprocessor system.

Learning Outcomes of Assessments

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

EXAM	1	2	3	4
CW	2	3	4	

Outline Syllabus

Typical Microprocessor-based system architecture
Volatile and Non-Volatile memory sub-systems including – SRAM, DRAM, PROM, EPROM, EEPROM and Flash
I/O subsystems including – UART (RS232, RS485), SPI, I2C, CAN
Common display systems including – LCD and seven segment displays.

Learning Activities

By a combination of lectures, tutorials, and laboratory design assignments.

Notes

This Level 2 module will provide undergraduate students in electronic engineering with intermediate level tools and skills necessary to design, test and implement electronic systems.