PROJ C2604: Mechatronics Project

Module Title:	Mechatronics Project
Language of Instruction:	English

Credits:	10

NFQ Level:	6

Module Delivered In	2 programme(s)

Module Aim:	Demonstrate an understanding of the relevance of the material studied in your degree to a successful career in industry Gain experience of relating academic skills and knowledge to solving real industrial problems Apply design and technical skills to analyse and provide solutions to industrial problems To introduce the student to the industrial environment with particular reference to the robotics industry and to the role and responsibilities of the engineer

Learning Outcomes	
On successful completion of this module the learner should be able to:	
LO1	Describe and select components/software/control methods
LO2	List the potential safety hazards associated with the project and complete the corresponding risk assessment form
LO3	Demonstrate the ability to plan and manage the project (inc. budget and time)
LO4	Employ theoretical knowledge to build and test a mechatronic system
LO5	Effectively communicate the project concept, plan, design and implementation through a presentation, report and interview
LO6	Team management and conflict resolution

Pre-requisite learning
Module Recommendations *This is prior learning (or a practical skill) that is recommended before enrolment in this module.*
No recommendations listed
Incompatible Modules *These are modules which have learning outcomes that are too similar to the learning outcomes of this module.*
No incompatible modules listed
Co-requisite Modules
No Co-requisite modules listed
Requirements *This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed.*
No requirements listed

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Module Content & Assessment

Indicative Content
Project Implementation of Project Management skills (e.g. Gantt Charts, Budget control) Risk Assessment Concept Design and Evaluation Research and selection of components/software Detailed design involving as appropriate: Instrumentation; Data Acquisition, PLC programming, Robotics; Vision systems;Process control; Motor Control.
Technical Communications Report writing, oral presentations
Management Practice Management styles, Management roles, Team leadership and motivation, Time management, Cost management and Conflict resolutions

Assessment Breakdown	%
Continuous Assessment	10.00%
Project	90.00%

Continuous Assessment				
Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Examination	Management studies	1,3,6	10.00	n/a

Project				
Assessment Type	*Assessment Description*	*Outcome addressed*	*% of total*	*Assessment Date*
Project	Interim Report and Presentation 15% Final Report and Presentation 25% System implementation and test 30% Team work and communication 20%	1,2,3,4,5,6	90.00	n/a

No Practical

No End of Module Formal Examination

SETU Carlow Campus reserves the right to alter the nature and timings of assessment

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Module Workload

Workload: Full Time		
Workload Type	*Frequency*	*Average Weekly Learner Workload*
Lecture	Every Week	1.00
Laboratories	Every Week	3.00
Independent Learning Time	Every Week	3.00
	Total Hours	7.00

Module Delivered In

Programme Code	Programme	Semester	Delivery
CW_EEROB_B	Bachelor of Engineering (Honours) in Robotics and Automated Systems	4	Mandatory
CW_EEROO_D	Bachelor of Engineering in Robotics and Automated Systems	4	Mandatory