



Title:	Project Research & Design APPROVED
Long Title:	Project Research & Design
Module Code:	MECH7016
Duration:	1 Semester
Credits:	5
NFQ Level:	Intermediate
Field of Study:	Mechanical Engineering
Valid From:	Semester 1 - 2017/18 (September 2017)
Module Delivered in	4 programme(s)
Module Coordinator:	GER KELLY
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Module Description:	This module offers the student a chance to utilise many of skills that have been developed throughout their engineering course to date. the student, as part of a team, will use best practice to identify a solution to an engineering problem. Potential solutions will be presented in the form of a literature survey as well as detailed designs. Each group will have to select, source and price any components that make up their solution.
Learning Outcomes	
<i>On successful completion of this module the learner will be able to:</i>	
LO1	Display initiative, analysis, teamwork and problem solving skills in addressing an engineering problem
LO2	Produce a comprehensive literature survey of the engineering project to identify similar solutions/techniques and current best practice.
LO3	Critically assess all potential solutions, outline a number of design concepts and identify the best solution
LO4	Utilise professional skills developed throughout the curriculum to design a comprehensive solution to the project objective.
LO5	Source, price and select material/components that make up the solution
LO6	Evaluate the business and ethical considerations of these designs.
Pre-requisite learning	
Module Recommendations	
<i>This is prior learning (or a practical skill) that is strongly recommended before enrolment in this module. You may enrol in this module if you have not acquired the recommended learning but you will have considerable difficulty in passing (i.e. achieving the learning outcomes of) the module. While the prior learning is expressed as named CIT module(s) it also allows for learning (in another module or modules) which is equivalent to the learning specified in the named module(s).</i>	
No recommendations listed	
Incompatible Modules	
<i>These are modules which have learning outcomes that are too similar to the learning outcomes of this module. You may not earn additional credit for the same learning and therefore you may not enrol in this module if you have successfully completed any modules in the incompatible list.</i>	
No incompatible modules listed	
Co-requisite Modules	
No Co-requisite modules listed	
Requirements	
<i>This is prior learning (or a practical skill) that is mandatory before enrolment in this module is allowed. You may not enrol on this module if you have not acquired the learning specified in this section.</i>	
No requirements listed	

Co-requisites

No Co Requisites listed

Module Content & Assessment

Indicative Content

Core Problem

Identify and formulate a concise set of objectives for the project

Literature Survey

Gather, critically analysing any potential solutions

Material Selection and Sourcing

Source, choose and price any material required

Business and Ethics

Consider the business implications and any ethical considerations that may occur

Detailed Design

Formulate a detailed design based on all previous outcomes/work

Assessment Breakdown

%

Course Work

100.00%

Course Work

<i>Assessment Type</i>	<i>Assessment Description</i>	<i>Outcome addressed</i>	<i>% of total</i>	<i>Assessment Date</i>
Presentation	Literature Review	1,2,3,6	50.0	Week 6
Project	Presentation of Detailed Design report	1,3,4,5,6	50.0	Sem End

No End of Module Formal Examination

Reassessment Requirement

Coursework Only

This module is reassessed solely on the basis of re-submitted coursework. There is no repeat written examination.

The institute reserves the right to alter the nature and timings of assessment

Module Workload

Workload: Full Time				
<i>Workload Type</i>	<i>Workload Description</i>	<i>Hours</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Tutorial	On going interaction with supervisor	3.0	Every Week	3.00
Independent & Directed Learning (Non-contact)	Project	4.0	Every Week	4.00
Total Hours				7.00
Total Weekly Learner Workload				7.00
Total Weekly Contact Hours				3.00

Workload: Part Time				
<i>Workload Type</i>	<i>Workload Description</i>	<i>Hours</i>	<i>Frequency</i>	<i>Average Weekly Learner Workload</i>
Tutorial	On going interaction with supervisor	3.0	Every Week	3.00
Independent & Directed Learning (Non-contact)	Project	4.0	Every Week	4.00
Total Hours				7.00
Total Weekly Learner Workload				7.00
Total Weekly Contact Hours				3.00

Module Resources

This module does not have any book resources

This module does not have any article/paper resources

Other Resources

- Website: *Guide to Writing a Project Report*
[https://newton.ex.ac.uk/handbook/PHY/for ms/WLB010919-4.pdf](https://newton.ex.ac.uk/handbook/PHY/for%20ms/WLB010919-4.pdf)
- Website: *Writing your Undergraduate Project Report*
<http://www.bradford.ac.uk/academic-skills/media/academicskillsadvice/documents/academicskillsresources/writing-reports/infosheet-Report-Writing-for-UGs.pdf>

Module Delivered in

Programme Code	Programme	Semester	Delivery
CR_EBIME_7	<u>Bachelor of Engineering in Biomedical Engineering</u>	5	Mandatory
CR_EMANF_7	<u>Bachelor of Engineering in Manufacturing Engineering</u>	5	Mandatory
CR_EMECH_7	<u>Bachelor of Engineering in Mechanical Engineering</u>	5	Mandatory
CR_EMECN_7	<u>Parttime - Bachelor of Engineering in Mechanical Engineering</u>	5	Group Elective 1