

Module code: MOD009188	Version: 1 Date Amended: 07/Feb/2023
-------------------------------	--

1. Module Title
Engineering Major Group Project

2a. Module Leader
Ahad Ramezanzpour

2b. School
School of Engineering and the Built Environment

2c. Faculty
Faculty of Science and Engineering

3a. Level
7

3b. Module Type
Project or dissertation (fine graded)

4a. Credits
30

4b. Study Hours
300

5. Restrictions			
Type	Module Code	Module Name	Condition
Pre-requisites:	None		
Co-requisites:	None		
Exclusions:	None		
Courses to which this module is restricted:			

LEARNING, TEACHING AND ASSESSMENT INFORMATION

6a. Module Description

The engineering major group project aims to give you the experience of working within a team and it is like the way engineers often work in the industry. The aim is for these projects to be defined in collaboration with industry in line with the active learning policy at ARU. You will integrate your knowledge and understanding to specify and solve a substantial and complex engineering problem. This will be done via the creation and development of a product, process, or system. The engineering major group project allows you to further develop your understanding of project and time management, societal and user needs, diversity and inclusion, ethics, sustainability and product life cycle, health and safety, risk, and intellectual property rights. You will develop your skills to function effectively in a team both as an individual and a leader. You will develop effective communication and leadership skills for both technical and non-technical audiences.

6b. Outline Content

- Project and time management, and critical path
- Project risk and resource management
- Considerations of health and safety, diversity, inclusion, cultural, societal, environmental, and commercial matters in a complex engineering problem
- Applications of code of practice and industry standards
- Application for research ethics including considerations for risk assessment and ethics
- Critically select and evaluate technical literature
- Design of experiment and data collection, critically evaluate the project scope and limitations to the techniques employed in carrying out the project
- Results analysis, interpretation, and validation
- Evaluate the environmental and lifecycle analysis for a product or a process
- Communicate and present project outcomes in both oral presentations (including Q&A) and written technical report
- Develop effective team working skills both as an individual and the team lead

6c. Key Texts/Literature

The reading list to support this module is available at: <https://readinglists.aru.ac.uk/>

6d. Specialist Learning Resources

Computer rooms, workshops, and Labs for experimental and numerical research. Use of library for engineering standards

7. Learning Outcomes (threshold standards)		
No.	Type	On successful completion of this module the student will be expected to be able to:
1	Knowledge and Understanding	Evaluate product and process in terms of health and safety, diversity, inclusion, cultural, societal, environmental, commercial, code of practice, and industry standards.
2	Knowledge and Understanding	Critically evaluate technical literature and other sources of information to solve complex problems.
3	Intellectual, practical, affective and transferrable skills	Design solutions and manage projects for complex engineering problem that meets societal, user, customer, and business needs.
4	Intellectual, practical, affective and transferrable skills	Formulate and analyse a complex engineering problem and reach substantial conclusions, critically evaluate the scope and limitations of techniques used and their uncertainties.
5	Intellectual, practical, affective and transferrable skills	Perform effectively as a team member or a leader in solving a complex engineering problem.
6	Intellectual, practical, affective and transferrable skills	Communicate engineering matters to the technical and non-technical audiences

8a. Module Occurrence to which this MDF Refers				
Year	Occurrence	Period	Location	Mode of Delivery
2026/7	ZZF	Template For Face To Face Learning Delivery		Face to Face

8b. Learning Activities for the above Module Occurrence			
Learning Activities	Hours	Learning Outcomes	Details of Duration, frequency and other comments
Lectures	0	NOne	None
Other teacher managed learning	20	1-6	Two hours of classroom contact in first 6 weeks of the trimester (total of 12 hours). Four group meeting, each 1 hour, with agenda and actions (chaired rota between group members). Four group supervisory meetings, each 1 hour, with agenda and actions.
Student managed learning	280	1-6	Self-directed learning
TOTAL:	300		

9. Assessment for the above Module Occurrence					
Assessment No.	Assessment Method	Learning Outcomes	Weighting (%)	Fine Grade or Pass/Fail	Qualifying Mark (%)
010	Coursework	1 3	20 (%)	Fine Grade	40 (%)
Maximum 2000 words report (maps to Engineering Council Learning Outcomes M5)					
Assessment No.	Assessment Method	Learning Outcomes	Weighting (%)	Fine Grade or Pass/Fail	Qualifying Mark (%)
011	Coursework	2 4 5	60 (%)	Fine Grade	40 (%)
Maximum 7000 words report (maps to Engineering Council Learning Outcomes M2, M3, M4, M16)					
Assessment No.	Assessment Method	Learning Outcomes	Weighting (%)	Fine Grade or Pass/Fail	Qualifying Mark (%)
012	Practical	6	20 (%)	Fine Grade	40 (%)
Oral Presentation to non-technical and technical audiences, total of 5+5 minutes per student (equivalent of maximum 1000 words report (maps to Engineering Council Learning Outcomes M17)					

In order to pass this module, students are required to achieve an overall mark of 40% (for modules at levels 3, 4, 5 and 6) or 50% (for modules at level 7*).

In addition, students are required to:

(a) achieve the qualifying mark for each element of fine graded assessment as specified above

(b) pass any pass/fail elements

[* the pass mark of 50% applies for all module occurrences from the academic year 2024/25 – see Section 3a of this MDF to check the level of the module and Section 8a of this MDF to check the academic year]