



MODULE SPECIFICATION

Part 1: Information			
Module Title	Engineering Project		
Module Code	UFMFX8-30-3	Level	Level 6
For implementation from	2022-23		
UWE Credit Rating	30	ECTS Credit Rating	15
Faculty	Faculty of Environment & Technology	Field	Engineering, Design and Mathematics
Department	FET Dept of Engin Design & Mathematics		
Module type:	Standard		
Pre-requisites	Engineering Research 2021-22		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description
<p>Overview: The Engineering Project module provides the opportunity for a student to undertake a detailed individual research project, demonstrating subject knowledge, project management skills and awareness of ethical and environmental impact of their work. The module follows directly from the level 5 module Engineering Research in which students develop a research proposal that could form the basis of the individual engineering project.</p> <p>The project may encompass any aspect of engineering, and may result from a student's industrial work, from personal interest and experience, or from the university.</p> <p>Learning is predominantly through independent, self-directed study, with the support of a project supervisor and the module leader. It is expected that students will develop a range of skills as their project activities develop, from specialist technical skills through to transferable skills.</p> <p>Educational Aims: The aim of this module is to provide the platform for students demonstrate substantial engineering subject knowledge and engineering management skill in the completion of an individual research project.</p> <p>The module provides evidence to relevant accreditation bodies that students have satisfied key</p>

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learning outcomes as defined by the Engineering Council UK by demonstrating the ability to integrate engineering knowledge and skills to manage a technical project and be aware of the ethical, societal and environmental of their work.

Outline Syllabus: Project manage their activities, from project selection, aims and objectives, through to identifying and discussing its outcomes and their dissemination.

Build awareness of health and safety issues relating to their project and any wider implications, ensuring a suitable risk assessment process is successfully undertaken.

Understand and assess the project's ethical, economic, legal, social and environmental issues.

Review appropriate background material and related academic literature. National codes of practice and policy should also be considered, as relevant.

Develop research methodology to relate their background research to the project application and use this methodology to analyse and evaluate the project and its process. Validate and explain the results achieved.

Develop their written and verbal communication skills to disseminate the project outcomes.

Discuss the activities undertaken and develop conclusions about the work done and its implications. Identify recommendations for further activity

Teaching and Learning Methods: This is a self-directed, self-managed individual project module. Each student is assigned a project supervisor. The role of the supervisor is to provide guidance and to monitor progress. Throughout the project, the student will meet their supervisor as required.

As the project is an independent activity, all the supporting material to support the project process will be provided via Blackboard. It is the students' responsibility to regularly review this material to ensure compliance with the process.

Students may develop further the project proposal developed in the module Engineering Research or develop a new project idea.

During the project selection and identification stage, students will work closely with their supervisor to formulate a research proposal. This will define the scope of the investigations and experimental studies to be undertaken. It will also establish the resources necessary for project completion. Additionally, the wider considerations about the project will be identified and managed accordingly.

Students are encouraged to develop their dissertations as the project work proceeds, to ensure all relevant aspects of the project are captured. Guidance will be given on the writing and composition of the dissertation.

Scheduled contact:

One-to-one: where the student and their supervisor meet, or, where a group of students working on related project topic meet together with their supervisor.

Self-study:

Students are expected to identify and make use of appropriate resources, including other staff, and students, where appropriate. Students are expected to engage with the study and the evaluation of their individual project investigation.

Review meetings will be held on a regular basis between supervisor and student, at which project planning and progress will be discussed. The meeting will enable the supervisor to give feedback to the student, concerning the work undertaken and the progress achieved. Such meetings will take place typically every two/three weeks during the teaching year. It will be the responsibility of the student to arrange and record such meetings.

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Part 3: Assessment

Component A Progress Presentation:

The student will present interim results and progress. Feedback from this presentation will feed into the completion of the work and the writing up of the dissertation report.

Component B:

B1 Research Proposal

This document will:

Record the formal requirements of the project, its aims, motivation and context.

Consider the ethical, economic, legal, social and environmental implications of the project

Identify the project management requirements, such as resources and risk considerations

Contain a project schedule and research plan.

Be a maximum of 10 pages in length, including a Contact Register of 2 pages.

The aim of this element is to ensure the project is planned properly, has started and is progressing as expected, with the potential to achieve a suitable outcome for the module. (Achieving Learning Outcomes 1 and 2)

B2 Project Report / Dissertation

The report will:

Record the project and the related processes

Contain relevant background supporting evidence

Include a clear methodology, and suitable analysis and evaluation

Provide clear conclusions and recommendations for further work based on the project's outcomes

Be a maximum of 12,000 words.

The aim of this element is to ensure the project is technically competent, properly managed and executed. Students are expected to use the dissertation to explain their project and its processes, and are marked on the dissertation – not the project itself. (Achieving Learning Outcomes 2 - 6)

Guidelines will be provided to aid project assessment, and will cover all aspects of the project investigation and management as described.

First Sit Components	Final Assessment	Element weighting	Description
Presentation - Component A	✓	25 %	Interim presentation
Written Assignment - Component B		10 %	Short proposal, project plan and initial documentation
Report - Component B		65 %	Report (12000 words)

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Resit Components	Final Assessment	Element weighting	Description
Presentation - Component A	✓	25 %	Presentation
Report - Component B		75 %	Report (12000 words)

Part 4: Teaching and Learning Methods															
Learning Outcomes	On successful completion of this module students will achieve the following learning outcomes:														
	<table border="1"> <thead> <tr> <th>Module Learning Outcomes</th> <th>Reference</th> </tr> </thead> <tbody> <tr> <td>Establish the critical issues to be examined and addressed in the execution of an engineering-discipline-related technical project.</td> <td>MO1</td> </tr> <tr> <td>Demonstrate effective management of a technical project and select appropriate knowledge sources to guide project execution and fulfil the project aims.</td> <td>MO2</td> </tr> <tr> <td>Complete a systematic study involving technical work, design and specification of critical components so as to enable experiments or simulations to be undertaken with success.</td> <td>MO3</td> </tr> <tr> <td>Analyse and evaluate experimental, simulation-based and other data arising, to complete a critical appraisal of the technical work undertaken for the project and the overall management of the investigation</td> <td>MO4</td> </tr> <tr> <td>Make clear, well-argued and supported recommendations for the continuation of the further work and development of the project.</td> <td>MO5</td> </tr> <tr> <td>Effectively communicate, verbally and in written format, technical understanding and recommendations achieved from the research investigation to a technical audience.</td> <td>MO6</td> </tr> </tbody> </table>	Module Learning Outcomes	Reference	Establish the critical issues to be examined and addressed in the execution of an engineering-discipline-related technical project.	MO1	Demonstrate effective management of a technical project and select appropriate knowledge sources to guide project execution and fulfil the project aims.	MO2	Complete a systematic study involving technical work, design and specification of critical components so as to enable experiments or simulations to be undertaken with success.	MO3	Analyse and evaluate experimental, simulation-based and other data arising, to complete a critical appraisal of the technical work undertaken for the project and the overall management of the investigation	MO4	Make clear, well-argued and supported recommendations for the continuation of the further work and development of the project.	MO5	Effectively communicate, verbally and in written format, technical understanding and recommendations achieved from the research investigation to a technical audience.	MO6
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Contact Hours	Independent Study Hours:														
	Independent study/self-guided study	286													
	Total Independent Study Hours:	286													
	Scheduled Learning and Teaching Hours:														
	Face-to-face learning	14													
	Total Scheduled Learning and Teaching Hours:	14													
	Hours to be allocated	300													
	Allocated Hours	300													
	Reading List	<p>The reading list for this module can be accessed via the following link:</p> <p>https://uwe.rl.talis.com/modules/ufmfx8-30-3.html</p>													

Part 5: Contributes Towards

This module contributes towards the following programmes of study:

Aerospace Engineering (Design) {Apprenticeship} [Sep][PT][UCW][4yrs] BEng (Hons) 2019-20

Aerospace Engineering with Pilot Studies (Design) {Foundation} [Sep][SW][Frenchay][5yrs] BEng (Hons) 2018-19

Automotive Engineering {Foundation} [Sep][SW][Frenchay][5yrs] BEng (Hons) 2018-19

Aerospace Engineering with Pilot Studies (Manufacturing) {Foundation} [Sep][SW][Frenchay][5yrs] BEng (Hons) 2018-19

Aerospace Engineering with Pilot Studies (Systems) {Foundation} [Sep][SW][Frenchay][5yrs] BEng (Hons) 2018-19

Aerospace Engineering (Manufacturing) {Apprenticeship} [Sep][PT][UCW][5yrs] BEng (Hons) 2018-19

Mechanical Engineering {Foundation} [Sep][SW][Frenchay][5yrs] BEng 2018-19