Module Specification

Individual Project MEng B

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Contents

Part 1: Information

Module title: Individual Project MEng B

Module code: UFMERY-30-M

Level: Level 7

For implementation from: 2023-24

UWE credit rating: 30

ECTS credit rating: 15

Faculty: Faculty of Environment & Technology

Department: FET Dept of Engineering Design & Mathematics

Partner institutions: None

Field: Engineering, Design and Mathematics

Module type: Module

Pre-requisites: Individual Project MEng A 2023-24

Excluded combinations: None

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: Pre-requisites: Students must take either UFMFY8-30-3 Individual Project MEng A OR UFMFX8-30-3 Individual Project BEng/BSc.

Features: Not applicable

Educational aims: It is expected that students will further develop their skills and competencies as their project activities expand, from specialist technical skills through to transferable skills. These will include the ability to:

Project manage their activities, relating the original project aims and objectives to their interim (UFMFY8-30-3 or UFMFX8-30-3) outcomes, recognising and discussing how this influences the expanded project activities.

Review and, if necessary, conduct further risk assessment to ensure all issues, including Health and Safety are recognised and mitigated.

Review and discuss the expanded project's ethical, economic, legal, social and environmental issues.

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

Extend and explain their research methodology, relating their background research, previous project outcomes and recommendations to the project application. Use this methodology to rigorously analyse and critically evaluate the extended project and its process. Validate the results achieved, derive explanations for any deviations from expectation and discuss the implications of these results.

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

Reflect upon activities undertaken and develop conclusions about the work done and its impact. Identify recommendations for further activity. This "MEng B" module's activity culminates in a thorough review and reflection of the project and its implications for impact and further work.

Outline syllabus: This project builds upon the Level 3 project (UFMFY8-30-3 or UFMFX8-30-3) in the following respects:

There is no project proposal. The Level 3 project report provides the basis of the project, and its continuation and expansion into Level M.

A discussion is required in the introduction to the project, explaining how it is being developed and why.

Having already completed a research project at level 3, students are expected to build on this experience and demonstrate a deep understanding, creativity, and rigour in their approach to and evaluation of the project.

Students will critically evaluate the project methodology and results obtained.

Students are expected to reflect upon their project activities, identifying good practice and areas for improvement.

As with the Level 3 module, learning is predominantly through independent, self-directed study, with the support of a project supervisor and the module leader.

Part 3: Teaching and learning methods

Teaching and learning methods: Students will normally work independently with limited supervision. 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. Scheduled group workshops to cover generic skills are encouraged, along with collaboration between students working on related projects.

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 will work closely with their supervisor to formulate a project plan resulting from their Level 3 project activity, to 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 the dissertation 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. 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. It will be the responsibility of the student to arrange such meetings. Informal contact can also take place between the student and the academic supervisor, if required. The student will be expected to take responsibility for informing his/her supervisor of any significant developments or changes.

Group: where students are provided with generic study skills advice e.g. information literacy, laboratory awareness.

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.

Scheduled individual/small group contact = 12 hours.
Self-study and Assessment = 288 hours.
Total = 300 hours.

Module Learning outcomes: On successful completion of this module students will achieve the following learning outcomes.

MO1 PROJECT PLANNING AND MANAGEMENT
Demonstrate the management of a self-directed original research project, cogent to their degree, reflecting a substantial piece of work.

MO2 PROJECT EXECUTION

Evaluate and critique research methodologies and identify an appropriate methodology to execute an in-depth, systematic study involving technical work.

MO3 PROJECT EVALUATION

Synthesise information, critically evaluate it and develop justified conclusions and recommendations.

MO4 PROJECT COMMUNICATION

Effectively communicate to a professional standard, technical understanding and recommendations achieved from the research investigation to a technical audience.

Hours to be allocated: 300

Contact hours:

Independent study/self-guided study = 288 hours

Face-to-face learning = 12 hours

Total = 300

Reading list: The reading list for this module can be accessed at readinglists.uwe.ac.uk via the following link https://uwe.rl.talis.com/modules/ufmery-30-m.html

Part 4: Assessment

Assessment strategy: Presentation (viva):
The student is required to present, discuss and demonstrate their understanding of the research undertaken, the findings and conclusions reached. Their project poster will be used to introduce the project to the Viva Panel. The project supervisor will prepare a range of questions to examine the student's depth of understanding and ability to reflect and learn from their activities (Achieving Learning Outcome 6).

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, planning and preparation for the project's development at Level M.
Be a maximum of 15,000 words, including reflection and discussion.

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. Their depth of understanding, ability to rigorously evaluate their data, and their reflection upon their activities are assessed (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. Assessment will be by the project supervisor, the first marker, assisted by another academic, the second marker. Both markers will scrutinise the project, and arrive at individual marks. They will use these marks to derive a provisional dissertation mark.

Marking Criteria: There will be a range of published criteria, focusing on three key aspects – the management of the project, the demonstration of technical competence, and their ability to dynamically evaluate and appraise their own activities, to ensure they meet the criteria for Masters level learning.

Moderation: There will be moderation of a sample of dissertations to ensure consistency across the marking team.

Assessment tasks:

Portfolio (First Sit)
Description: Progression Portfolio
(Progress Review = meeting with the supervisor where evidence is presented)

Progress Review 1: Evidence of meeting with supervisor (and technician) to

generate initial project concept including aims, objectives, scopes, research questions, ethics. Set targets for the next progress review.

Progress Review 2: Evidence of risk assessment, project management, evaluation of methodology, references, and setting targets for the next progress review.

Progress Review 3: Evidence of work undertaken so far and addressing the targets set in the previous progress review.
Weighting:
Final assessment: No
Group work: No
Learning outcomes tested: MO1

Report (First Sit)
Description: Submission of a journal, conference, technical report or design summary containing their research activities. Typically this will be a 10-15 page report (Note: This module has an overall pass mark of 50%)
Weighting: 50 %
Final assessment: No
Group work: No
Learning outcomes tested: MO2, MO3, MO4

Presentation (First Sit)
Description: Viva style - presentation and individual questioning (typically 45 mins) or where appropriate a demonstration of the engineering work in practice.
Weighting: 50 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO2, MO3, MO4

Portfolio (Resit)
Description: Progression Portfolio
Combined portfolio review meeting where evidence for the following topics is presented:

- Evidence of meeting with supervisor (and technician) to generate initial project concept including aims, objectives, scopes, research questions, ethics.
- Evidence of risk assessment, project management, evaluation of methodology, references, and setting targets for the next progress review.
- Evidence of work undertaken so far and addressing the targets set in the previous progress review.
- Reflection on project delivery.

Weighting:
Final assessment: No
Group work: No
Learning outcomes tested: MO1

Report (Resit)
Description: Submission of a journal, conference, technical report or design summary containing their research activities. Typically this will be a 10-15 page report.
Weighting: 50 %
Final assessment: No
Group work: No
Learning outcomes tested: MO2, MO3, MO4

Presentation (Resit)
Description: Viva style - presentation and individual questioning (typically 45 mins) or where appropriate a demonstration of the engineering work in practice.
Weighting: 50 %
Final assessment: Yes
Group work: No
Learning outcomes tested: MO2, MO3, MO4

Part 5: Contributes towards

This module contributes towards the following programmes of study:

Civil Engineering [Jan][FT][Northshore][4yrs] - Not Running MEng 2020-21

Electronic Engineering [Sep][FT][Frenchay][4yrs] MEng 2020-21

Aerospace Engineering [Sep][FT][Frenchay][4yrs] - Not Running MEng 2020-21

Aerospace Engineering (Design) [Sep][FT][Frenchay][4yrs] - Not Running MEng 2020-21

Aerospace Engineering (Systems) [Sep][FT][Frenchay][4yrs] - Not Running MEng 2020-21

Aerospace Engineering (Manufacturing) [Sep][FT][Frenchay][4yrs] - Not Running MEng 2020-21

Aerospace Engineering (Systems) [Sep][FT][Frenchay][3yrs] - Not Running BEng (Hons) 2020-21

Aerospace Engineering with Pilot Studies (Manufacturing) [Sep][FT][Frenchay][4yrs] - Not Running MEng 2020-21

Aerospace Engineering with Pilot Studies [Sep][FT][Frenchay][4yrs] - Not Running MEng 2020-21

Aerospace Engineering with Pilot Studies (Systems) [Sep][FT][Frenchay][4yrs] - Not Running MEng 2020-21

Aerospace Engineering with Pilot Studies (Design) [Sep][FT][Frenchay][4yrs] - Not Running MEng 2020-21

Automotive Engineering [Sep][FT][Frenchay][4yrs] - Not Running MEng 2020-21

Aerospace Engineering [Sep][SW][Frenchay][5yrs] MEng 2019-20

Aerospace Engineering with Pilot Studies [Sep][SW][Frenchay][5yrs] MEng 2019-20

Aerospace Engineering (Design) [Sep][SW][Frenchay][5yrs] MEng 2019-20

Aerospace Engineering (Manufacturing) [Sep][SW][Frenchay][5yrs] MEng 2019-20

Aerospace Engineering with Pilot Studies (Design) [Sep][SW][Frenchay][5yrs] MEng 2019-20

Aerospace Engineering with Pilot Studies (Manufacturing) [Sep][SW][Frenchay][5yrs] MEng 2019-20

Aerospace Engineering with Pilot Studies (Systems) [Sep][SW][Frenchay][5yrs] MEng 2019-20

Aerospace Engineering (Systems) [Sep][SW][Frenchay][5yrs] MEng 2019-20

Electronic Engineering [Sep][SW][Frenchay][5yrs] MEng 2019-20

Automotive Engineering [Sep][SW][Frenchay][5yrs] MEng 2019-20

Automotive Engineering {Foundation} [Sep][FT][Frenchay][5yrs] MEng 2019-20

Automotive Engineering {Foundation} [Sep][SW][Frenchay][6yrs] MEng 2018-19

Mechanical Engineering {Foundation} [Sep][SW][Frenchay][6yrs] MEng 2018-19