Module Specification

Masters Group Project

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Contents

Part 1: Information

Module title: Masters Group Project

Module code: UFMFXC-15-M

Level: Level 7

For implementation from: 2023-24

UWE credit rating: 15

ECTS credit rating: 7.5

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: None

Excluded combinations: None

Co-requisites: None

Continuing professional development: No

Professional, statutory or regulatory body requirements: None

Part 2: Description

Overview: Not applicable

Features: Module entry requirements: Engineering qualifications to Degree Level or equivalent.

Educational aims: See Learning Outcomes

Outline syllabus: Students will be provided with an outline of selected design-problems. Groups (typically 5/6 students) will choose a project from this list. The

development of the final project specification is carried out by the group (with lecturer(s)' feedback).

This is a project module and the indicative content listed below is illustrative as to what would be expected to be covered by a group project.

Design of experiments; use of controls. Pilot experiments. Logging and recording data. Evaluation of alternative solutions and methods for validating design solutions. Decision matrices.

Design methods: the design process, and the systematic approach to design problems: requirement analysis, problem identification, problem solving methods, tools, preparation of specifications.

Professional reporting: aimed at understanding reporting requirements for outcomes; design requirement, experiment design and approach, descision making, impact, reflection and evaluation.

Information search and retrieval. Use of libraries as research tools. Databases of publications.

Part 3: Teaching and learning methods

Teaching and learning methods: Formal Lectures: 6 hours
Assimilation and skill development: 35 hours
Team Mentoring: 9 hours
Project work: 100 hours
Total: 150 hours

NB: Where students are engaged in this module through distance and work based learning, contact will be replaced by engagement with electronic learning materials and suitable mentoring and e-learning support.

This is a group work module with collaborative working an essential element of a student's progress and development. Each group will be provided with a definition/specification of their project. The problem outline, consultations during the study, final assessment and feedback will be facilitated through mentoring sessions with staff supporting the project groups. Contact time may also include visits to industry and consultation with other specialists at UWE.

Students will be expected to learn independently and carry out reading and directed study beyond that available in taught classes and tutorial sessions.

Students will be required to give oral progress reports (as groups) at key stages of the project. Formative feedback will be given at this time.

Scheduled learning includes lectures, seminars, tutorials, project supervision, demonstration, practical classes and workshops; fieldwork; external visits; work based learning; supervised time in studio/workshop.

Independent learning includes hours engaged with essential reading, case study preparation, assignment preparation and completion etc.

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

MO1 Apply interdisciplinary knowledge to an engineering design problem

MO2 Investigate and incorporate practical constraints into the design and the manufacturing process

MO3 Critically evaluate alternative solutions within the constraints of the project specification

MO4 Solve open-ended problems and apply theoretical concepts and methods to challenges arising in a business environment

MO5 Critically evaluate the management of an interdisciplinary project and reflect on their role and contribution to project team

MO6 Indendently research topics from academic and professional literature

Hours to be allocated: 150

Contact hours:

Independent study/self-guided study = 135 hours

Face-to-face learning = 15 hours

Total = 150

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/ufmfxc-15-m.html

Part 4: Assessment

Assessment strategy: The assessment strategy is designed to support students in their independent study, providing feedback so that each group is aware of their progress as they work towards the submission of their group report.

A mid-term technical presentation is used to check progress and indentify any issues that may affect a successful completion of the project. Each group presents their alternative design concepts/solutions and a discussion (Q and A) session is used to provide feedback.

The output of the project will be a 5000 word report which will be assessed on the quality of the professional reporting and communication skills, technical aspects, research findings, methodology/approach and data analysis.

A transparent method will be in place for identifying students who are not making an appropriate level of contribution to the work of the group. This peer assessed process is moderated by the module leader and is used to rescale report marks on an individual basis if required.

The resit will be the same as the first sit.

Resit deliverable(s) will be scaled appropriately to group size and task complexity

Assessment tasks:

Report (First Sit)
Description: Group report (Max. 5000 words)
Weighting: 100 %
Final assessment: Yes
Group work: Yes
Learning outcomes tested: MO1, MO2, MO3, MO4, MO5, MO6

Report (Resit)
Description: Group report (Max. 5000 words)

Resit deliverable(s) will be scaled appropriately to group size and task complexity
Weighting: 100 %
Final assessment: Yes
Group work: Yes
Learning outcomes tested: MO1, MO2, MO3, MO4, MO5, MO6

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

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

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

Mechanical Engineering [Sep][PT][Frenchay][2yrs] - Not Running MSc 2022-23