



Module Specification

Engineering Management

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Part 1: Information

Module title: Engineering Management

Module code: UFMFTG-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: 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: Not applicable

Educational aims: See Learning Outcomes

Outline syllabus: Communication management in an organisation: forms of communication, effective vs. ineffective communication, communication as a function of management, role of communications in motivation and leadership, team building,

group behaviour, negotiation, and conflict management, barriers to good communication.

Legal concepts: establishment of companies and introduction to business law; fundamentals of contract law; common types of contracts; contract documentation; labour law, legal responsibilities relating to product liability and professional negligence.

Intellectual Property Rights: patents, trade secrets and copy rights; procedure for obtaining patents, copy rights and trademarks.

Effects of Environmental Factors: The effects of extraneous factors on the operations of engineering organizations, such as ethics and corporate social responsibilities issues.

Financial Management: Conduct and interpret managerial analyses of financial data of a business, use of finance and accounting in business decisions' sources of finance, ratio analysis and presentation of financial information.

Engineering Economics: compare different investment alternatives based on quantitative methods, such as payback period, net present value (NPV), internal rate of return (IRR) methods and choose the best alternative, uncertainty in decision making and sensitivity analysis.

Part 3: Teaching and learning methods

Teaching and learning methods: Overview: Large group lecture supported by tutorial group sessions. The tutorial sessions are designed to encourage the student to pragmatically develop their domain specific competences whilst simultaneously developing professional managerial and project management skills, under tutor guidance. Study time outside of contact hours will be spent working on the group project exercise.

Scheduled learning: Students receive guidance on team dynamics and form teams. The projects proceed in parallel with lectures, to guide student centred learning. Students will be required to operate within a set of guidelines which will mandate a professional standard of record keeping at the individual and team level. Teams will receive guidance and support during their team meetings held during the 2hr tutorials.

Independent learning: Much of the course work will be undertaken outside the supported sessions.

Hours

Contact 72

Assimilation and skill development 140

Undertaking coursework 40

Exam preparation 48

Total 300

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.

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

MO1 Develop necessary skills for effective communication in an engineering organization so as to perform the basic functions of management, i.e., planning, organising, directing and controlling.

MO2 Ability to implement organizational strategies in the light of legal, regulatory, economic, social, and political contexts of a business.

MO3 Understanding of the ethical issues in engineering and demonstrate a personal and professional commitment to society and the environment.

MO4 Conduct and interpret managerial analyses of a range of financial data for business.

MO5 Understand the concepts of investment analysis and time value of money, compare different investment alternatives, recognize the uncertainty in decision making and assess how sensitive the results are to variations in different parameters.

Hours to be allocated: 300

Contact hours:

Independent study/self-guided study = 228 hours

Face-to-face learning = 72 hours

Total = 300

Reading list: The reading list for this module can be accessed at [readinglists.uwe.ac.uk](https://uwe.rl.talis.com/index.html) via the following link <https://uwe.rl.talis.com/index.html>

Part 4: Assessment

Assessment strategy: Your achievements in the module will be assessed as follows:

A three-hour written examination at the end of the semester.

Individual assignment.

Group presentation.

Group assignment.

Resit:

Resit assessment will be the same as the first sit.

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

Assessment tasks:

Group work (First Sit)

Description: Group assignment

Weighting: 20 %

Final assessment: No

Group work: Yes

Learning outcomes tested: MO2, MO4, MO5

Examination (First Sit)

Description: Exam (180 minutes)

Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4, MO5

Written Assignment (First Sit)

Description: Individual assignment

Weighting: 20 %

Final assessment: No

Group work: No

Learning outcomes tested: MO1, MO2, MO3, MO4

Presentation (First Sit)

Description: Group presentation

Weighting: 10 %

Final assessment: No

Group work: Yes

Learning outcomes tested: MO1, MO2, MO5

Group work (Resit)

Description: Group assignment

Weighting: 20 %

Final assessment: No

Group work: Yes

Learning outcomes tested:

Examination (Resit)

Description: Exam (180 minutes)

Weighting: 50 %

Final assessment: Yes

Group work: No

Learning outcomes tested:

Written Assignment (Resit)

Description: Individual assignment

Weighting: 20 %

Final assessment: No

Group work: No

Learning outcomes tested:

Presentation (Resit)

Description: Group presentation

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

Weighting: 10 %

Final assessment: No

Group work: Yes

Learning outcomes tested:

Part 5: Contributes towards

This module contributes towards the following programmes of study: