

MODULE DESCRIPTION FORM

DEPARTMENT OF MECHANICAL AND AEROSPACE ENGINEERING

ME519 (ME522_{sem1}) MENG GROUP PROJECT

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| Module Registrar: Dr M Oliveira monica.oliveira@strath.ac.uk | Taught To (Course): Cohorts for whom class is compulsory | |
| Other Lecturers Involved: Dr David Butler and MAE Supervisors | Credit Weighting: 40 (ME522 - 20) | Semester: 1 and 2 |
| Compulsory class | Academic Level: 5 | Suitable for Exchange: Y (ME519 or ME22) |

Alternative codes and credit values for those taking only one semester:

Semester 1: ME522 MEng Group Project [20 Credits / ECTS 10]

Required prerequisites

Note: It is the responsibility of ALL students to ensure that they satisfy the prerequisite knowledge for this module BEFORE adding as part of curriculum selection. If unsure, please contact the Module Registrar or discuss with your Programme/Year Adviser of Studies.

Years 1 – 4 of appropriate Mechanical Engineering Degree programme.

Project dependent: please check with supervisors.

Module Format and Delivery (HOURS i.e. 1 credit = 10hrs of study):

| Lecture | Tutorial | Laboratory | Groupwork | External | Online | Project | Assignments | Private Study | Total |
|---------|----------|------------|-----------|----------|--------|---------|-------------|---------------|-------|
| | | | 380 | | 20 | | | | 400 |

Educational Aim

This module aims to give students an authentic experience of managing and contributing to a complex group project. This will include an opportunity to demonstrate mastery of the technical aspects of the project, in addition to demonstrating competence in project management, technical risk management and safety risk assessment.

Learning Outcomes

On completion of the module the student is expected to be able to:

- LO1 Appreciate the principles of project management and planning
- LO2 Reflect on their role in a team and their interaction with team members
- LO3 Appreciate the importance of technical risk and health and safety management
- LO4 Demonstrate experience in the practice of engineering principles

Syllabus

Students will form groups and be allocated a project topic, supervised by a member of staff. All students will take part in intensive workshops on project management, technical risk management and safety risk assessment. Each group will then write a statement of purpose detailing the deliverables and schedule for the project. This will be agreed with the supervisor, who will take on the role of client. The statement of purpose will form a contract between the group and the client.

Students will carry out the project, and report to the assessment team in December (interim presentation/report) and at the conclusion of the project (time agreed in contract). Groups will be assessed on the extent to which they have met the deliverables set out in the contract, as well as on the quality of reflection on the group process and project management experience.

Assessment of Learning Outcomes

Criteria

For each of the Module Learning Outcomes the following criteria will be used to make judgements on student learning:

- LO1 Appreciate the principles of project management and planning
 - C1 Show an ability to develop a detailed project plan
 - C2 Be able to analyse the critical path of a project
 - C3 Understand project estimating and project control
- LO2 Reflect on their role in a team and their interaction with team members
 - C1 Critically analyse their contribution to the project
 - C2 Consider the interaction between team members
 - C3 Reflect of the influence of team structure on team effectiveness
- LO3 Appreciate the importance of technical risk and health and safety management
 - C1 Understand the need for technical risk management
 - C2 Apply appropriate methods to support risk analysis
 - C3 Appreciate the role of uncertainty and modelling
 - C4 Appreciate the obligations of health and safety law
- LO4 Demonstrate experience in the practice of engineering principles
 - C1 Apply or develop appropriate methodologies required for project development
 - C2 Master the technical aspects of the project

The standards set for each criterion per Module Learning Outcome to achieve a pass grade are indicated on the assessment sheet for all assessment.

Principles of Assessment and Feedback

(within Assessment and Feedback Policy at: <https://www.strath.ac.uk/professionalservices/staff/policies/academic/>)

The following principles have been addressed in the design of the assessment.

Deliver high quality feedback information that helps learners self-correct.

The assessment is by oral presentations and dialogue, which provides instant feedback on group performance in a two-way communication process. Students should note that regular meetings with their project supervisor will provide individual on-going formative feedback throughout the project, and they should make effective use of these meetings.

Ensure that summative assessment has a positive impact on learning.

The summative assessment is through oral presentations, after which feedback/mark sheets are completed by each assessor. These are returned to each group within a week of the assessment. Groups are encouraged to discuss any issues with the assessors.

Give choice in the topic, method, criteria, weighting or timing of assessments.

Project deliverables and deadlines will be defined by the group through a statement of purpose. Progress at each oral presentation is assessed against these criteria. Each group will define the detailed work on their project in negotiation with the supervisor (client). Peer assessment allows students to engage in assessment.

Assessment Method(s) Including Percentage Breakdown and Duration of Exams (*individual weightings*)

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|------------|---|-----|
| | Assessment is by project work, reports and oral examinations, as follows: | |
| | Interim assignment/presentation | 30% |
| | Final report/presentation/promotional material | 70% |
| L/Outcomes | All learning outcomes are assessed by all assessments | |

Indicate which learning outcomes (L01, L02 etc) are to be assessed by exam/coursework/project as required.

Coursework / Submissions deadlines (*academic weeks*):

Statement of purpose, semester 1 week 4

Interim assignment (including video recording of presentation if online), semester 1 exam diet

Final report/presentation/promotional material (video pitch/executive summary leaflet), semester 2 week 10

SUBMISSION DEADLINES WILL BE STRICTLY APPLIED. LATE SUBMISSION OF REPORTS/PAPERS OR NON-ATTENDANCE AT ORAL WILL BE RECORDED AS 'ABSENT' AND ZERO MARKS AWARDED. Any personal circumstances that may cause late submission should be recorded and processed following usual procedures.

Resit Assessment Procedures:

A group that fails to meet the threshold level for a pass will be allowed to complete further work over summer, with submission during the August exam diet. This will be assessed for the August Board of Examiners.

Students must contact the module Registrar for details as soon as results confirm that a resit is required.

PLEASE NOTE:

Students must gain a summative mark of 50% to pass the module. Students who fail the module at the first attempt will be re-assessed during the August diet. This re-assessment will consist of oral examinations. No marks from any previous attempts will be transferred to a new resit attempt.

Recommended Reading

No specific recommendations. (students will be expected to research extensively in support of their project)

Additional Student Feedback

(Please specify details of when additional feedback will be provided)

Session: 2021/22

Feedback is individually given to each group. Additional feedback is provided to each group after each assessment in the form of written feedback sheets.

Approved:

Course Director Signature: E Henderson

Date of Last Modifications: 31/08/2021

MODULE TIMETABLE

Module Code:

**ME519 /
ME522 (sem1)**

Module Title:

MEng Group Project

Brief Description of Assessment:

Interim assignment/presentation (S1)

Final report/presentation/promotional materials (S2), all other timings defined by student groups at outset of project.

SUBMISSION DEADLINES WILL BE STRICTLY APPLIED. LATE SUBMISSION OF REPORTS/PAPERS OR NON-ATTENDANCE AT PRESENTATION(S) WILL BE RECORDED AS "ABSENT" AND ZERO MARKS AWARDED.

Assessment Timing:-

Indicate on the table below the start/submission dates for each assignment/project and the timing of each exam/assessment using the dropdowns provided. Dropdowns can be left blank. Add extra notes below the dropdowns.

Please note: Timings can and will change, this should only be used as a guide.

| Semester One | W&D Wk | WK1 | WK2 | WK3 | WK4 | WK5 | WK6 | WK7 | WK8 | WK9 | WK10 | WK11 | Exam Period |
|--------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|---------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| | Choose an item. Choose an item. | Choose an item. Choose an item. | Choose an item. Choose an item. | Choose an item. Choose an item. | Choose an item. Choose an item. | Course work Submit SoW | Choose an item. Choose an item. | Choose an item. Choose an item. | Choose an item. Choose an item. | Choose an item. Choose an item. | Choose an item. Choose an item. | Choose an item. Choose an item. | Choose an item. Choose an item. |

| Semester Two | C&D Wk | WK1 | WK2 | WK3 | WK4 | WK5 | WK6 | WK7 | WK8 | WK9 | WK10 | WK11 | Exam Period |
|--------------|-----------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|--|------------------------------------|
| | Present ation Interim Oral | Choose an item. Choose an item. | Choose an item. Choose an item. | Choose an item. Choose an item. | Choose an item. Choose an item. | Choose an item. Choose an item. | Choose an item. Choose an item. | Choose an item. Choose an item. | Choose an item. Choose an item. | Choose an item. Choose an item. | Choose an item. Choose an item. | Coursewo rk Submit Final report & other materials | Choose an item. Choose an item. |