# ENGG3050

Engineering Leadership and Entrepreneurship

Session 1, In person-scheduled-weekday, North Ryde 2022

School of Engineering

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**Disclaimer**

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**Notice**

As part of Phase 3 of our return to campus plan, most units will now run tutorials, seminars and other small group activities on campus, and most will keep an online version available to those students unable to return or those who choose to continue their studies online.

To check the availability of face-to-face activities for your unit, please go to timetable viewer. To check detailed information on unit assessments visit your unit’s iLearn space or consult your unit convenor.

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https://unitguides.mq.edu.au/unit_offerings/149842/unit_guide/print
## General Information

<table>
<thead>
<tr>
<th>Unit convenor and teaching staff</th>
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<tbody>
<tr>
<td>Convenor</td>
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- **Credit points**: 10

- **Prerequisites**: ((ENGG2000 or ENGG200) and (ENGG450 or ENGG2050))

- **Corequisites**

- **Co-badged status**
Unit description
The 5th SPINE unit aims to develop professional, transferable and employability skills. This unit deals with the skills required to effectively lead and manage an ill-defined engineering project. Students will be exposed to tools and concepts that are integral to the success of any engineering projects. Students will be able to perform the appropriate cost/benefit analysis and apply the appropriate risk mitigation techniques to ensure project success. Furthermore, students will be able to view all engineering projects and endeavours from a finance perspective and the ability to apply the appropriate priorities to balance societal benefits verses financial gains. Students will be able to apply these skills in managing any large-scaled multi-domain multi-disciplinary projects.

Important Academic Dates
Information about important academic dates including deadlines for withdrawing from units are available at https://www.mq.edu.au/study/calendar-of-dates

Learning Outcomes
On successful completion of this unit, you will be able to:

ULO1: Analyse and model engineering projects for feasibility using cost, benefit and efficiency perspectives.

ULO2: Applying management and leadership tools to effectively engage with the relevant stakeholders of an engineering project.

ULO3: Explain and demonstrate ethical judgment and ethical practices.

ULO4: Apply appropriate tools to manage teams to ensure timely delivery of engineering outcomes.

ULO5: Communicate an engineering solution as a value proposition to relevant stakeholders.

General Assessment Information
Grading and passing requirement for unit
In order to pass this unit, a student must obtain a mark of 50 or more for the unit (i.e. obtain a passing grade P/ CR/ D/ HD).

For any late submission of assignments, 100% will be deducted. The stringent penalty enforcement is to be in line with the professional skills development within the SPINE units. Extenuating circumstances will be considered upon lodgement of a formal request for special consideration and/or with prior notice. Resubmission of work is generally NOT allowed unless stated.

For further details about grading, please refer below to the policies and procedures section.
Professional Hurdle (Fitness to practice)

Starting from 2nd year and onwards, all SPINE units will be applying the professional hurdle requirement widely known as “Fitness to Practice”. According to the policy, fitness to practice is deemed as exhibiting behaviours that demonstrate professional competence, acceptable professional behaviour, freedom from an impairment, and compliance with program-specific requirements needed for a student to practice properly and safely throughout their Practical, Clinical or Professional program or unit. Failure to demonstrate these qualities will result in students being at risk of not progressing in the professional engineering program regardless of their marks and grades within individual units. Please refer to the University policy for further details.

Assessment Tasks

<table>
<thead>
<tr>
<th>Name</th>
<th>Weighting</th>
<th>Hurdle</th>
<th>Due</th>
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<tbody>
<tr>
<td>Workshop participation</td>
<td>10%</td>
<td>No</td>
<td>Weekly</td>
</tr>
<tr>
<td>Case study 1</td>
<td>17%</td>
<td>No</td>
<td>Week 5</td>
</tr>
<tr>
<td>Case study 2</td>
<td>17%</td>
<td>No</td>
<td>Week 12</td>
</tr>
<tr>
<td>Reflective writing</td>
<td>6%</td>
<td>No</td>
<td>Week 7 and 13</td>
</tr>
<tr>
<td>In class presentation</td>
<td>20%</td>
<td>No</td>
<td>Between Week 8-13 (more info on iLearn)</td>
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<tr>
<td>Online quizzes</td>
<td>30%</td>
<td>No</td>
<td>Week 4, 6, 8, 10 and 12</td>
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Workshop participation

Assessment Type 1: Participatory task
Indicative Time on Task 2: 0 hours
Due: Weekly
Weighting: 10%

Weekly participation in workshop activities. Indicative hours spent on assessment excludes scheduled workshop hours.

On successful completion you will be able to:

- Analyse and model engineering projects for feasibility using cost, benefit and efficiency perspectives.
- Applying management and leadership tools to effectively engage with the relevant
stakeholders of an engineering project.
• Explain and demonstrate ethical judgment and ethical practices.
• Apply appropriate tools to manage teams to ensure timely delivery of engineering outcomes.
• Communicate an engineering solution as a value proposition to relevant stakeholders.

Case study 1
Assessment Type 1: Case study/analysis
Indicative Time on Task 2: 10 hours
Due: Week 5
Weighting: 17%

Case study on engineering entrepreneurship

On successful completion you will be able to:
• Analyse and model engineering projects for feasibility using cost, benefit and efficiency perspectives.
• Applying management and leadership tools to effectively engage with the relevant stakeholders of an engineering project.
• Explain and demonstrate ethical judgment and ethical practices.
• Communicate an engineering solution as a value proposition to relevant stakeholders.

Case study 2
Assessment Type 1: Case study/analysis
Indicative Time on Task 2: 10 hours
Due: Week 12
Weighting: 17%

Case study on engineering leadership

On successful completion you will be able to:
• Applying management and leadership tools to effectively engage with the relevant stakeholders of an engineering project.
• Explain and demonstrate ethical judgment and ethical practices.
• Apply appropriate tools to manage teams to ensure timely delivery of engineering
Reflective writing
Assessment Type 1: Reflective Writing
Indicative Time on Task 2: 5 hours
Due: Week 7 and 13
Weighting: 6%

Reflective writing on transferable skills learnt. There will be two required submission at two-time points in the semester. Refer to iLearn for more information.

On successful completion you will be able to:
- Analyse and model engineering projects for feasibility using cost, benefit and efficiency perspectives.
- Explain and demonstrate ethical judgment and ethical practices.

In class presentation
Assessment Type 1: Presentation
Indicative Time on Task 2: 14 hours
Due: Between Week 8-13 (more info on iLearn)
Weighting: 20%

In class presentation on a given research topic

On successful completion you will be able to:
- Communicate an engineering solution as a value proposition to relevant stakeholders.

Online quizzes
Assessment Type 1: Quiz/Test
Indicative Time on Task 2: 16 hours
Due: Week 4, 6, 8, 10 and 12
Weighting: 30%

5 online quizzes throughout session
On successful completion you will be able to:

- Analyse and model engineering projects for feasibility using cost, benefit and efficiency perspectives.
- Applying management and leadership tools to effectively engage with the relevant stakeholders of an engineering project.
- Explain and demonstrate ethical judgment and ethical practices.
- Apply appropriate tools to manage teams to ensure timely delivery of engineering outcomes.

1 If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the Learning Skills Unit for academic skills support.

2 Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

Delivery and Resources

All slides and materials, recommended book list and pdfs will be provided on iLearn.

Unit Schedule

Refer to iLearn for a detailed schedule.

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (https://policies.mq.edu.au). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- Academic Appeals Policy
- Academic Integrity Policy
- Academic Progression Policy
- Assessment Policy
- Fitness to Practice Procedure
- Grade Appeal Policy
- Complaint Management Procedure for Students and Members of the Public
- Special Consideration Policy

Students seeking more policy resources can visit Student Policies (https://students.mq.edu.au/su}
Student Support

Macquarie University provides a range of support services for students. For details, visit http://students.mq.edu.au/support/

The Writing Centre

The Writing Centre provides resources to develop your English language proficiency, academic writing, and communication skills.

- Getting help with your assignment
- Workshops
- Chat with a WriteWISE peer writing leader
- Access StudyWISE
- Upload an assignment to Studiosity
- Complete the Academic Integrity Module

The Library provides online and face to face support to help you find and use relevant information resources.

- Subject and Research Guides
- Ask a Librarian

Student Enquiry Service

For all student enquiries, visit Student Connect at ask.mq.edu.au

If you are a Global MBA student contact globalmba.support@mq.edu.au

Equity Support

Students with a disability are encouraged to contact the Disability Service who can provide

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/admin/other-resources/student-conduct

Results

Results published on platform other than eStudent, (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in eStudent. For more information visit ask.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

To find other policies relating to Teaching and Learning, visit Policy Central (https://policies.mq.edu.au) and use the search tool.

Unit guide ENGG3050 Engineering Leadership and Entrepreneurship

Support/study/policies). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.
appropriate help with any issues that arise during their studies.

**IT Help**

For help with University computer systems and technology, visit [http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/](http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/).

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources Policy](http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/). The policy applies to all who connect to the MQ network including students.

**Changes from Previous Offering**

This is a new unit offering.