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Disclaimer
Macquarie University has taken all reasonable measures to ensure that the information in this publication is accurate and up-to-date. However, the information may change or become out-dated as a result of changes in University policies, procedures or rules. The University reserves the right to make changes to any information in this publication without notice. Users of this publication are advised to check the website version of this publication [or the relevant faculty or department] before acting on any information in this publication.

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.
### General Information

<table>
<thead>
<tr>
<th>Unit convenor and teaching staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecturer</td>
</tr>
<tr>
<td>Rex Di Bona</td>
</tr>
<tr>
<td><a href="mailto:rex.dibona@mq.edu.au">rex.dibona@mq.edu.au</a></td>
</tr>
<tr>
<td>Contact via email</td>
</tr>
<tr>
<td>50 Waterloo Road, Level 1</td>
</tr>
<tr>
<td>Friday 3pm-5pm</td>
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<table>
<thead>
<tr>
<th>Credit points</th>
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<table>
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<tr>
<th>Prerequisites</th>
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<td>ENGG3000 or ENGG300</td>
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<th>Corequisites</th>
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<th>Co-badged status</th>
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<table>
<thead>
<tr>
<th>Unit description</th>
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<tbody>
<tr>
<td>In this professional practice capstone unit students will work as teams of consulting engineers to provide an engineering solution to a real societal need or problem, and which addresses a Sustainable Development Goal (SDG). The teams may be multidisciplinary, as required by the nature of the project, and will source a valuable exposure to an in-depth understanding of the problem, the relevant industry, and the socio-technical and other contexts in which the need or problem arose, and the engineered system or solution required. The teams will be expected to organise, plan, and perform all other tasks associated with good engineering practice, including discussion and reflection around the engineering problem and the engineering process. Individual and collective technical and professional competencies will be demonstrated through the production of a substantial report and presentation for consideration. An appreciation of the various contexts and factors impacting upon engineering practice will be developed.</td>
</tr>
</tbody>
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### Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at [https://students.mq.edu.au/important-dates](https://students.mq.edu.au/important-dates)

### Learning Outcomes

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

ULO2: Effectively and professionally communicate engineering concepts in multiple
modes to a range of audiences.

ULO1: Work productively in teams of professional engineers.

ULO4: Examine and reflect on the socio-technical and other contexts in which engineering is practiced.

ULO3: Develop and deliver a professional engineering report, detailing the problem to be solved, the proposed problem solution, a critique of the solution and the reasons why the solution was chosen or recommended.

ULO5: Exercise professional and self reflective practice.

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).

Grades for this unit will be issued as a letter grade (P/CR/D/HD) only, as per Section 2.3 of Schedule 1 of the Assessment Policy.

For further details about grading, please refer below in the policies and procedures section.

This capstone unit has a "Fitness to Practice" hurdle requirement that students must meet in order to pass this unit. Any students who do not meet the professionalism required of the Unit will first be warned formally via email and an in-person meeting. For further details please refer to the policies and procedures section, specifically the Fitness to Practice Procedure.

There is a hurdle requirement for the final report. If this report fails the hurdle requirement a second attempt will be provided during the examination period for re-submission of the final report. The maximum grade possible for the second attempt is the hurdle threshold grade.

Assessment Tasks

<table>
<thead>
<tr>
<th>Name</th>
<th>Weighting</th>
<th>Hurdle</th>
<th>Due</th>
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<tbody>
<tr>
<td>In session quizzes</td>
<td>30%</td>
<td>No</td>
<td>Weeks 2, 8, 10 and 12</td>
</tr>
<tr>
<td>Engineering presentation</td>
<td>15%</td>
<td>No</td>
<td>Week 13</td>
</tr>
<tr>
<td>Progress Report</td>
<td>15%</td>
<td>No</td>
<td>Week 6</td>
</tr>
<tr>
<td>Final report</td>
<td>30%</td>
<td>Yes</td>
<td>Week 13</td>
</tr>
<tr>
<td>Portfolio</td>
<td>10%</td>
<td>No</td>
<td>Week 13</td>
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</table>
In session quizzes
Assessment Type 1: Quiz/Test
Indicative Time on Task 2: 15 hours
Due: **Weeks 2, 8, 10 and 12**
Weighting: **30%**

A series of small quizzes to reflect on the foundation scaffolding learning materials supporting the design of a solution

On successful completion you will be able to:

- Examine and reflect on the socio-technical and other contexts in which engineering is practiced.
- Exercise professional and self reflective practice.

Engineering presentation
Assessment Type 1: Presentation
Indicative Time on Task 2: 15 hours
Due: **Week 13**
Weighting: **15%**

Each group will provide a presentation of their engineering solution

On successful completion you will be able to:

- Effectively and professionally communicate engineering concepts in multiple modes to a range of audiences.
- Work productively in teams of professional engineers.
- Examine and reflect on the socio-technical and other contexts in which engineering is practiced.
- Develop and deliver a professional engineering report, detailing the problem to be solved, the proposed problem solution, a critique of the solution and the reasons why the solution was chosen or recommended.

Progress Report
Assessment Type 1: Report
Indicative Time on Task 2: 15 hours
Due: **Week 6**
Weighting: **15%**

A preliminary progress report outlining preliminary findings, a plan for the remaining work including individual roles within the team
On successful completion you will be able to:

- Effectively and professionally communicate engineering concepts in multiple modes to a range of audiences.
- Work productively in teams of professional engineers.
- Examine and reflect on the socio-technical and other contexts in which engineering is practiced.

Final report

Assessment Type: Report
Indicative Time on Task: 30 hours
Due: Week 13
Weighting: 30%

This is a hurdle assessment task (see assessment policy for more information on hurdle assessment tasks)

Groups will produce a professional engineering report on the engineering solution to the chosen problem

On successful completion you will be able to:

- Effectively and professionally communicate engineering concepts in multiple modes to a range of audiences.
- Work productively in teams of professional engineers.
- Examine and reflect on the socio-technical and other contexts in which engineering is practiced.
- Develop and deliver a professional engineering report, detailing the problem to be solved, the proposed problem solution, a critique of the solution and the reasons why the solution was chosen or recommended.

Portfolio

Assessment Type: Portfolio
Indicative Time on Task: 12 hours
Due: Week 13
Weighting: 10%

Students will contribute regularly to an individual portfolio, recording a summary of professional practice engagement activities. (Note: the portfolio should be updated regularly, as appropriate depending on the variety of tasks).

On successful completion you will be able to:

- Exercise professional and self reflective practice.
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.

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**

This unit will require you to work in an engineering group solving a real world problem. For 2021 we will be working with Ryde Council on problems concerning sustainability that occur in an urban environment.

**Unit Schedule**

Refer to ilearn for details.

**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/support/study/policies). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

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

**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

Student Support

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

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to help you improve your marks and take control of your study.

• Getting help with your assignment
• Workshops
• StudyWise
• 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 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/. When using the University's IT, you must adhere to the Acceptable Use of IT Resources Policy. The policy applies to all who connect to the MQ network including students.

Changes from Previous Offering

In this offering we will be working with the City of Ryde Council on issues in our local area.
## Changes since First Published

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>18/02/2021</td>
<td>The submission date for the scoping document has been moved to week 6 in line with mid session breaks.</td>
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