ENGG1000

Introduction to Engineering

Session 2, In person-scheduled-weekday, North Ryde 2026

School of Engineering

Contents

Disclaimer

Macquarie University has taken all reasonable measures to ensure the information in this publication is accurate and up-to-date. However, the information may change or become out-dated as a result of change 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.

General Information

Unit convenor and teaching staff
Unit convenor
Leonardo Callegaro
leonardo.callegaro@mq.edu.au
Contact via Email
School of Engineering, Level 2, 9 Wally's Walk
Via appointment

Co-convenor
June Ho
june.ho@mq.edu.au
Contact via Email
School of Engineering, Level 3, 9 Wally's Walk
Via appointment

Credit points
10

Prerequisites

Corequisites

Co-badged status

Unit description
What makes a good engineer? In ENGG1000, you will explore how engineering can make a meaningful difference to both people and the planet. Through hands-on projects, design challenges, and real-world problem solving, you will develop practical solutions to contemporary issues while gaining exposure to key engineering disciplines—civil, mechanical, mechatronics, electrical and electronics, and software engineering. You will collaborate with peers, apply foundational knowledge, and critically reflect on your work and emerging professional identity. As you engage with the wider engineering community, you will build a deeper understanding of the ethical, sustainable, and social responsibilities of engineering. By the end of this unit, you will have developed cross-disciplinary technical skills, creative problem-solving approaches, and the curiosity and confidence to shape your path as an engineer of the future.

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: Describe the scope, roles, and interrelationships of various engineering disciplines within the broader context of engineering practice.

ULO2: Apply foundational theoretical knowledge and practical skills to design and prototype basic engineering solutions.

ULO3: Demonstrate effective communication, teamwork, self-reflection, and independent working skills in a variety of engineering contexts.

ULO4: Identify sustainability considerations, safe working and ethical responsibilities in contemporary engineering practice.

General Assessment Information

Requirements to Pass this Unit

To pass this unit you need to: Achieve a total mark equal to or greater than 50% across all assessments.

Hurdle Assessments

There is no hurdle assessment in this unit.

Late Assessment Submission

Late assessments are not accepted in this unit unless a Special Consideration has been submitted and approved.

Special Consideration

The Special Consideration Policy aims to support students who have been impacted by short-term circumstances or events that are serious, unavoidable and significantly disruptive, and which may affect their performance in assessment. If you experience circumstances or events that affect your ability to complete the assessments in this unit on time, please inform the convenor and submit a Special Consideration request through http://connect.mq.edu.au/.

Short Extensions

For some assessment types, students are allowed to request an extra 3 calendar days to complete eligible assessments. No reason or evidence is required.

In this unit, assessments Skill 1 and Skill 2 accept Short Extension.

Assessment Tasks

Name	Weighting	Hurdle	Due	Groupwork/Individual	Short Extension	AI Approach
Presentation	20%	No	18/10/2026	Group	No	Observed

Name	Weighting	Hurdle	Due	Groupwork/Individual	Short Extension	AI Approach
Skill 2	40%	No	08/11/2026	Individual	Yes	Open
Skill 1	40%	No	13/09/2026	Individual	Yes	Open

Presentation

Assessment Type [1]: Presentation task
Indicative Time on Task [2]: 14 hours
Due: **18/10/2026**
Weighting: **20%**
Groupwork/Individual: Group
Short extension [3]: No
AI Approach: Observed

Your group will deliver a presentation reflecting on your teamwork and your understanding of the engineering discipline.

On successful completion you will be able to:

- Demonstrate effective communication, teamwork, self-reflection, and independent working skills in a variety of engineering contexts.

Skill 2

Assessment Type [1]: Portfolio
Indicative Time on Task [2]: 25 hours
Due: **08/11/2026**
Weighting: **40%**
Groupwork/Individual: Individual
Short extension [3]: Yes
AI Approach: Open

You will create a portfolio documenting your learning journey in the second skills set module, including evidence of foundational knowledge from class activities and your final prototype.

On successful completion you will be able to:

- Describe the scope, roles, and interrelationships of various engineering disciplines within the broader context of engineering practice.
- Apply foundational theoretical knowledge and practical skills to design and prototype basic engineering solutions.
- Identify sustainability considerations, safe working and ethical responsibilities in contemporary engineering practice.

Skill 1

Assessment Type [1]: Portfolio
Indicative Time on Task [2]: 25 hours
Due: **13/09/2026**
Weighting: **40%**
Groupwork/Individual: Individual
Short extension [3]: Yes
AI Approach: Open

You will create a portfolio documenting your learning journey in the first skills set module, including evidence of foundational knowledge from class activities and your final prototype.

On successful completion you will be able to:

- Describe the scope, roles, and interrelationships of various engineering disciplines within the broader context of engineering practice.
- Apply foundational theoretical knowledge and practical skills to design and prototype basic engineering solutions.
- Identify sustainability considerations, safe working and ethical responsibilities in contemporary engineering practice.

---

[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
- Academic Success 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.

[3] An automatic short extension is available for some assessments. Apply through the Service Connect Portal.

Delivery and Resources

Lecture will start from week 1.

There will be no pracs/SGTAs/workshops in week 1. The workshops will start from Week 2.

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

Methods of Communication

We will communicate with you via your university email and through announcements on iLearn. Queries to convenors can either be placed on the iLearn discussion board or sent to the unit convenor via the contact email on iLearn.

Unit Schedule

Refer to iLearn for 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
- Assessment Procedure
- Complaints Resolution 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 connect.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

Academic Integrity

At Macquarie, we believe academic integrity – honesty, respect, trust, responsibility, fairness and courage – is at the core of learning, teaching and research. We recognise that meeting the expectations required to complete your assessments can be challenging. So, we offer you a range of resources and services to help you reach your potential, including free online writing and maths support, academic skills development and wellbeing consultations.

Student Support

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

Academic Success

Academic Success provides resources to develop your English language proficiency, academic writing, and communication skills.

- Ask a Study Coach
- 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 Services and Support

Macquarie University offers a range of Student Support Services including:

- IT Support
- Accessibility and disability support with study
- Mental health support
- Safety support to respond to bullying, harassment, sexual harassment and sexual assault
- Social support including information about finances, tenancy and legal issues
- Student Advocacy provides independent advice on MQ policies, procedures, and processes

Student Enquiries

Got a question? Ask us via the Service Connect Portal, or contact Service Connect.

IT Help

For help with University computer systems and technology, visit https://students.mq.edu.au/support/technology/service-desk.

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

We value student feedback to be able to continually improve the way we offer our units. As such we encourage students to provide constructive feedback via student surveys, to the teaching staff directly, or via the FSE Student Experience & Feedback link in the iLearn page.

Student feedback from the previous offering of this unit was very positive overall, with students pleased with the clarity around assessment requirements and the level of support from teaching staff. As such, no change to the delivery of the unit is planned, however we will continue to strive to improve the level of support and the level of student engagement.

Engineers Australia Competency Mapping

EA Competency Standard		Unit Learning Outcomes
Knowledge and Skill Base	1.1 Comprehensive, theory-based understanding of the underpinning fundamentals applicable to the engineering discipline.	ULO1
	1.2 Conceptual understanding of underpinning maths, analysis, statistics, computing.	ULO1
	1.3 In-depth understanding of specialist bodies of knowledge	ULO1
	1.4 Discernment of knowledge development and research directions	ULO3
	1.5 Knowledge of engineering design practice	ULO1,ULO2
	1.6 Understanding of scope, principles, norms, accountabilities of sustainable engineering practice.	
Engineering Application Ability	2.1 Application of established engineering methods to complex problem solving	ULO1
	2.2 Fluent application of engineering techniques, tools and resources.	ULO3
	2.3 Application of systematic engineering synthesis and design processes.	ULO5
	2.4 Application of systematic approaches to the conduct and management of engineering projects.	ULO2
Professional and Personal Attributes	3.1 Ethical conduct and professional accountability.	ULO2,ULO4
	3.2 Effective oral and written communication in professional and lay domains.	ULO5
	3.3 Creative, innovative and pro-active demeanour.	ULO5
	3.4 Professional use and management of information.	
	3.5 Orderly management of self, and professional conduct.	ULO2
	3.6 Effective team membership and team leadership	ULO2

Unit information based on version 2026.07 of the Handbook