ENGG4092

Engineering Research Thesis Extension A

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

School of Engineering

Contents

General Information

Unit convenor and teaching staff
Unit Convenor
Hazer Inaltekin
hazer.inaltekin@mq.edu.au
Contact via Contact via email
9 WW, Room 2111
Appointment via email

Stuart Jackson
stuart.jackson@mq.edu.au

Credit points
10

Prerequisites
Permission by special approval

Corequisites
CIVL4090 or COMP4092 or ELEC4092 or MECH4092 or MTRN4092 or TELE4092

Co-badged status

Unit description
This unit may be taken concurrently with any Engineering Research Thesis A unit to allow deeper study of the thesis topic. Students should consider taking this unit (and ENGG4093) if they are doing an industry thesis, international thesis project, or are planning to go on to higher degree research. The expectations associated with workload and contribution in this unit supersede those in the required Engineering Research Thesis A unit (XXXX4090 or XXXX4092).

Learning in this unit enhances student understanding of global challenges identified by the United Nations Sustainable Development Goals (UNSDGs) Industry, Innovation and Infrastructure

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 a complex engineering problem, and propose solutions involving the development of new knowledge or the application of cutting edge techniques.
ULO2: Plan a major engineering research project, including the design of necessary processes, information management, records keeping, project management, and communications.
ULO3: Demonstrate an advanced knowledge of contextual factors, research direction, and foundational concepts from the engineering discipline of your specialisation.
ULO4: Apply core engineering principles and practices to a research or industry challenge.
ULO5: Demonstrate intellectual independence and an in-depth understanding of a specialist topic, through verbal and written communication.

General Assessment Information

Grading and Passing Requirement for the 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 further details about grading, please refer below in the policies and procedures section.

Late Submissions and Re-submissions

All assessments must be submitted by 23:59pm (Sydney Time) on their due date. Should the activities be missed due to illness or misadventure, students may apply for Special Consideration, as detailed below.

- **Project Report:** Late submissions are not allowed unless there is an approved special consideration request. Resubmissions are not allowed.
- **Oral Defence:** Late submissions are not allowed unless there is an approved special consideration request showing that the student cannot make the presentation on the presentation date. Resubmissions are not allowed.
- **Project Management and Progress Portfolio:** Late submissions are not allowed unless there is an approved special consideration request. Resubmissions are not allowed.

Project Implementation

If your project requires on-campus lab attendance and you are not able to get back to campus on time, please contact with the unit convenor and your supervisor as soon as possible.

Short Extensions

No short extensions are allowed.

Release Dates

Results for all assessment tasks will be released after the examination period, in accordance with the University's official examination results publication schedule.

Assessment Tasks

Name	Weighting	Hurdle	Due	Groupwork/Individual	Short Extension	AI Approach
Project Report	40%	No	08/11/2026	Individual	No	Open
Oral Defence	40%	No	Week 14-16	Individual	No	Observed
Project Management and Progress Portfolio	20%	No	08/11/2026	Individual	No	Observed

Project Report

Assessment Type [1]: Written Submission
Indicative Time on Task [2]: 45 hours
Due: **08/11/2026**
Weighting: **40%**
Groupwork/Individual: Individual
Short extension [3]: No
AI Approach: Open

Reports are the standard way engineers and researchers communicate project outcomes to technical and academic audiences. You will prepare a written report covering your aims, research question, literature review, methodology, design, progress and key achievements. This develops your technical writing, critical synthesis and research planning skills.

On successful completion you will be able to:

- Analyse a complex engineering problem, and propose solutions involving the development of new knowledge or the application of cutting edge techniques.
- Plan a major engineering research project, including the design of necessary processes, information management, records keeping, project management, and communications.
- Demonstrate an advanced knowledge of contextual factors, research direction, and foundational concepts from the engineering discipline of your specialisation.
- Apply core engineering principles and practices to a research or industry challenge.
- Demonstrate intellectual independence and an in-depth understanding of a specialist topic, through verbal and written communication.

Oral Defence

Assessment Type [1]: Presentation task
Indicative Time on Task [2]: 15 hours
Due: **Week 14-16**
Weighting: **40%**
Groupwork/Individual: Individual
Short extension [3]: No
AI Approach: Observed

Presenting project work and responding to questions from expert audiences is a routine part of professional engineering practice. You will present your project and respond to examiner questions during the exam period. This develops your communication skills and your ability to defend your research decisions under questioning.

On successful completion you will be able to:

- Analyse a complex engineering problem, and propose solutions involving the development of new knowledge or the application of cutting edge techniques.
- Plan a major engineering research project, including the design of necessary processes, information management, records keeping, project management, and communications.
- Demonstrate an advanced knowledge of contextual factors, research direction, and foundational concepts from the engineering discipline of your specialisation.
- Apply core engineering principles and practices to a research or industry challenge.
- Demonstrate intellectual independence and an in-depth understanding of a specialist topic, through verbal and written communication.

Project Management and Progress Portfolio

Assessment Type [1]: Portfolio
Indicative Time on Task [2]: 15 hours
Due: **08/11/2026**
Weighting: **20%**
Groupwork/Individual: Individual
Short extension [3]: No
AI Approach: Observed

Regular supervisor meetings and a project logbook reflect the self-directed practice expected of professional engineers. You will meet with your supervisor throughout the project and maintain a logbook recording your activities, decisions and progress. This builds your self-management, initiative and capacity to work independently on a substantial project.

On successful completion you will be able to:

- Analyse a complex engineering problem, and propose solutions involving the

development of new knowledge or the application of cutting edge techniques.
- Plan a major engineering research project, including the design of necessary processes, information management, records keeping, project management, and communications.
- Demonstrate an advanced knowledge of contextual factors, research direction, and foundational concepts from the engineering discipline of your specialisation.
- Apply core engineering principles and practices to a research or industry challenge.
- Demonstrate intellectual independence and an in-depth understanding of a specialist topic, through verbal and written communication.

---

[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

Unit Delivery

This is a project-based unit and has no scheduled lectures or tutorial sessions. Special lectures may be organised and related announcements will be made via iLearn.

Week 1 Activities

An online student information session will be organized in Week 1. The recording will be uploaded to iLearn.

Progress Portfolio and Logbook

This unit requires a logbook. The students should maintain an individual logbook which should contain a dated log of day-to-day activities undertaken in relation to the project.

Technology Used and Required

The students are required to discuss with their supervisor about the software/hardware resources required for analysis, simulation, testing and experiments related to their project. In addition, word processing software (MS Word, Latex etc.) will be required to produce the preliminary thesis and MS PowerPoint or equivalent software will be required for presentation slides.

Unit Webpage

Access from the online iLearn System at http://ilearn.mq.edu.au

Required and Recommended Texts/Materials

There is not set textbook for this unit. The students are required to discuss with their supervisor regarding required/recommended reading materials, as suited to individual project needs.

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

The assessment structure has been updated for this offering. The Project Report is now weighted at 40%, the Oral Defence at 40%, and the Project Management and Progress Portfolio at 20%. These changes place greater emphasis on demonstrated project progress, regular supervisor engagement, and the ability to communicate and defend project decisions.

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

Unit information based on version 2026.03 of the Handbook