



ENGG8102

Engineering Management Capstone

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

School of Engineering

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General Information

Unit convenor and teaching staff

Unit convenor

June Ho

june.ho@mq.edu.au

Contact via Email

Room 306, Level 3, 9 Wally's Walk

Via appointment

Credit points

10

Prerequisites

60cp at 6000 level or above

Corequisites

Co-badged status

Unit description

In this capstone unit, you will apply your knowledge of engineering management to the planning, design, and delivery of projects in a practical context. You will explore engineering management processes across the full project lifecycle, from initiation through to completion, with consideration of real-world constraints and organisational contexts.

You will undertake the design of medium to large-scale engineering projects based on realistic scenarios, drawing on interdisciplinary perspectives where appropriate. Through applied project work, you will develop the ability to integrate advanced engineering management principles into practice, preparing you for professional roles across a range of engineering contexts.

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: Apply acquired analytical and theoretical knowledge to the design and implementation of engineering projects

ULO2: Identify the responsibilities and deliverables of engineering managers from the project's initiation to successful completion.

ULO3: Compare different project delivery methods, assess the associated risks, and follow standard procedures for risk mitigation.

ULO4: Estimate project timelines and scheduling resources within required budgets.

ULO5: Evaluate progress and performance, and take necessary measures for optimum output.

General Assessment Information

Requirements to pass the 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 Extension

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, short extensions are not accepted.

Assessment Tasks

Name	Weighting	Hurdle	Due	Groupwork/Individual	Short Extension	AI Approach
Quiz on Engineering Management domains	30%	No	In week 8 (date to be released by 16 August)	Individual	No	Observed
Final Presentation	30%	No	In week 12 or 13, during the seminar class.	Individual and Group	No	Observed
Final Report	40%	No	08/11/2026	Individual and Group	No	Open

Quiz on Engineering Management domains

Assessment Type ¹: Examination

Indicative Time on Task ²: 40 hours

Due: **In week 8 (date to be released by 16 August)**

Weighting: **30%**

Groupwork/Individual: Individual

Short extension ³: No

AI Approach: Observed

You will complete a quiz on Engineering Management domains to demonstrate your knowledge of the discipline.

On successful completion you will be able to:

- Apply acquired analytical and theoretical knowledge to the design and implementation of engineering projects

Final Presentation

Assessment Type ¹: Presentation task

Indicative Time on Task ²: 25 hours

Due: **In week 12 or 13, during the seminar class.**

Weighting: **30%**

Groupwork/Individual: Individual and Group

Short extension ³: No

AI Approach: Observed

Communicating engineering management outcomes is an essential aspect of professional practice. In this assessment, you will deliver an oral presentation outlining the key outcomes of your engineering management project. This assessment develops skills in professional communication, synthesis of project work, and the presentation of engineering solutions to

relevant audiences.

On successful completion you will be able to:

- Apply acquired analytical and theoretical knowledge to the design and implementation of engineering projects
- Identify the responsibilities and deliverables of engineering managers from the project's initiation to successful completion.
- Compare different project delivery methods, assess the associated risks, and follow standard procedures for risk mitigation.
- Estimate project timelines and scheduling resources within required budgets.
- Evaluate progress and performance, and take necessary measures for optimum output.

Final Report

Assessment Type ¹: Written Submission

Indicative Time on Task ²: 60 hours

Due: **08/11/2026**

Weighting: **40%**

Groupwork/Individual: Individual and Group

Short extension ³: No

AI Approach: Open

Developing and communicating engineering management solutions is central to professional practice. In this assessment, you will work in a group to produce a project report that addresses key stages of an engineering management project, including planning, design, and evaluation. This assessment develops skills in project planning, technical communication, and the application of engineering management principles in practice.

On successful completion you will be able to:

- Apply acquired analytical and theoretical knowledge to the design and implementation of engineering projects
- Identify the responsibilities and deliverables of engineering managers from the project's initiation to successful completion.
- Compare different project delivery methods, assess the associated risks, and follow standard procedures for risk mitigation.
- Estimate project timelines and scheduling resources within required budgets.
- Evaluate progress and performance, and take necessary measures for optimum output.

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

Classes will commence in Week 1, and all teaching activities will be conducted on campus.

Unit materials are available 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

Please refer to iLearn site for details.

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](https://policies.mq.edu.au) (<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) (<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 \(https://policies.mq.edu.au\)](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

Assessment Quiz is changed to Observed.

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	ULO1
	1.5 Knowledge of engineering design practice	ULO1
	1.6 Understanding of scope, principles, norms, accountabilities of sustainable engineering practice.	ULO1
Engineering Application Ability	2.1 Application of established engineering methods to complex problem solving	ULO2, ULO3, ULO4, ULO5
	2.2 Fluent application of engineering techniques, tools and resources.	ULO2, ULO3, ULO4, ULO5

	2.3 Application of systematic engineering synthesis and design processes.	ULO2, ULO3, ULO4, ULO5
	2.4 Application of systematic approaches to the conduct and management of engineering projects.	ULO2, ULO3, ULO4, ULO5
Professional and Personal Attributes	3.1 Ethical conduct and professional accountability.	ULO2
	3.2 Effective oral and written communication in professional and lay domains.	ULO2
	3.3 Creative, innovative and pro-active demeanour.	ULO2
	3.4 Professional use and management of information.	ULO2
	3.5 Orderly management of self, and professional conduct.	ULOs
	3.6 Effective team membership and team leadership	ULO2

Unit information based on version 2026.03 of the [Handbook](#)