



ENGG8103

Engineering Management and Communication

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

School of Engineering

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Disclaimer

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General Information

Unit convenor and teaching staff

Dr Nazmul Huda

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Contact via 02 9850 2249

44 Waterloo Road, Room 118

Tuesday 3.00 - 5.00 PM

Credit points

10

Prerequisites

Admission to MEngMgt or MEngElecEng or MEngNetTeleEng

Corequisites

Co-badged status

Unit description

This unit is required for the Master of Engineering Management program and is designed to deliver a broad range of skills on engineering management and communication from an organisation's perspective. The content covered is designed for diverse engineering backgrounds and includes engineering management in the context of a project, engineering research approaches and communication skills. It will also include other aspects of communication, leadership, procurement, human resource management and technology management skills.

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 interdisciplinary knowledge from engineering, business, and management in engineering project management.

ULO2: Apply knowledge of organizational behaviour and expertise to the management and leadership of people and organisations.

ULO3: Implement advanced and integrated knowledge of engineering management, with a specific focus on project management, supply chain solutions, engineering leadership,

and human resource management.

ULO4: Utilize research skills to develop new knowledge, data, interpretations or information in the field of engineering management.

General Assessment Information

Late submissions

Online quizzes, in-class activities, or scheduled tests and exams must be undertaken at the time indicated in the unit guide. Should these activities be missed due to illness or misadventure, students may apply for Special Consideration.

Should these assessments be missed due to illness or misadventure, students should apply for Special Consideration.

Assessments not submitted by the due date will receive a mark of zero.

Resubmission of work is not permitted under any circumstances.

Grading and passing requirement for unit

In order to pass the unit satisfactorily, the students need to fulfill the following criteria:

1. At least 50% marks overall

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

The unit will be graded according to the Macquarie University Grading policy. The following grades will be used according to the listed numerical range:

HD	High Distinction	85-100
D	Distinction	75-84
Cr	Credit	65-74
P	Pass	50-64
F	Fail	0-49

Final Examinations Final examinations will typically take place at the end of the semester. For further information, please refer to the Examination Timetable website on www.mq.edu.au

If you receive special consideration for the final exam, a supplementary exam will be scheduled by the faculty during a supplementary exam period, typically about 3 to 4 weeks after the normal exam period. By making a special consideration application for the final exam you are declaring yourself available for a resit during the supplementary examination period and will not be eligible for a second special consideration approval based on pre-existing commitments. Please ensure you are familiar with the policy prior to submitting an application. Approved applicants will receive

an individual notification one week prior to the exam with the exact date and time of their supplementary examination.

Assessment Tasks

Name	Weighting	Hurdle	Due
Group project report	30%	No	Week 13
Group Project Presentation	10%	No	Week 13
Final Examination	30%	No	During final examination period at the end of the semester
Case studies	30%	No	Week 5, Week 8, Week 12

Group project report

Assessment Type ¹: Report

Indicative Time on Task ²: 16 hours

Due: **Week 13**

Weighting: **30%**

Group project and team work activity

On successful completion you will be able to:

- Apply interdisciplinary knowledge from engineering, business, and management in engineering project management.
- Apply knowledge of organizational behaviour and expertise to the management and leadership of people and organisations.
- Implement advanced and integrated knowledge of engineering management, with a specific focus on project management, supply chain solutions, engineering leadership, and human resource management.
- Utilize research skills to develop new knowledge, data, interpretations or information in the field of engineering management.

Group Project Presentation

Assessment Type ¹: Presentation

Indicative Time on Task ²: 6 hours

Due: **Week 13**

Weighting: **10%**

Group Project Presentation

On successful completion you will be able to:

- Apply interdisciplinary knowledge from engineering, business, and management in engineering project management.
- Apply knowledge of organizational behaviour and expertise to the management and leadership of people and organisations.
- Implement advanced and integrated knowledge of engineering management, with a specific focus on project management, supply chain solutions, engineering leadership, and human resource management.
- Utilize research skills to develop new knowledge, data, interpretations or information in the field of engineering management.

Final Examination

Assessment Type ¹: Examination

Indicative Time on Task ²: 30 hours

Due: **During final examination period at the end of the semester**

Weighting: **30%**

Final Examination

On successful completion you will be able to:

- Apply interdisciplinary knowledge from engineering, business, and management in engineering project management.
- Apply knowledge of organizational behaviour and expertise to the management and leadership of people and organisations.
- Implement advanced and integrated knowledge of engineering management, with a specific focus on project management, supply chain solutions, engineering leadership, and human resource management.
- Utilize research skills to develop new knowledge, data, interpretations or information in the field of engineering management.

Case studies

Assessment Type ¹: Case study/analysis

Indicative Time on Task ²: 18 hours

Due: **Week 5, Week 8, Week 12**

Weighting: **30%**

Case studies on Engineering Project Management

On successful completion you will be able to:

- Apply interdisciplinary knowledge from engineering, business, and management in engineering project management.
- Apply knowledge of organizational behaviour and expertise to the management and leadership of people and organisations.
- Implement advanced and integrated knowledge of engineering management, with a specific focus on project management, supply chain solutions, engineering leadership, and human resource management.
- Utilize research skills to develop new knowledge, data, interpretations or information in the field of engineering management.

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 [Writing Centre](#) 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

Please note:

- All teaching activities will be conducted on campus.
- Lectures will start from Week 1 (Week 1 to Week 13)
- The practical workshop will run only two weeks (on Week 8 and Week 9)

*Any student unable to get back to campus in time should contact the convenor As Soon As Possible.

Books:

1. Management for Engineers, Scientist, and Technologists, by John Chelsom, Andrew Payne, Lawrence Reavill, Publisher - John Wiley and Sons
2. Project Management – The Managerial Process (7th E), by Erik Larson, Clifford Gray, ISBN: 9781259666094, McGraw-Hill Publications
3. Engineering Project Management by Nigel J. Smith, ISBN-13: 978-1405168021

Software: MS Project Pro (Software download link and license key will be provided to all students). This software is only compatible with Microsoft Windows operating system.

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 ask.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/>

The Writing Centre

[The Writing Centre](#) provides resources to develop your English language proficiency, academic writing, and communication skills.

- [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 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 Enquiries

Got a question? Ask us via [AskMQ](#), or contact [Service Connect](#).

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.

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	UL01, UL02, UL03, UL04
	1.4 Discernment of knowledge development and research directions	
	1.5 Knowledge of engineering design practice	
	1.6 Understanding of scope, principles, norms, accountabilities of sustainable engineering practice.	UL01, UL02, UL03
Engineering Application Ability	2.1 Application of established engineering methods to complex problem solving	
	2.2 Fluent application of engineering techniques, tools and resources.	UL04
	2.3 Application of systematic engineering synthesis and design processes.	
	2.4 Application of systematic approaches to the conduct and management of engineering projects.	UL01, UL02, UL03, UL04
Professional and Personal Attributes	3.1 Ethical conduct and professional accountability.	UL01, UL02, UL03, UL04
	3.2 Effective oral and written communication in professional and lay domains.	UL01, UL02, UL03, UL04
	3.3 Creative, innovative and pro-active demeanour.	
	3.4 Professional use and management of information.	UL01, UL02, UL03, UL04

	3.5 Orderly management of self, and professional conduct.	UL01, UL02, UL03, UL04
	3.6 Effective team membership and team leadership	UL01, UL02, UL03, UL04