ENGG8103
Engineering Management and Communication
Session 1, In person-scheduled-weekday, North Ryde 2024
School of Engineering

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General Information

Unit convenor and teaching staff
Nazmul Huda
nazmul.huda@mq.edu.au
Contact via +61 2 9850 2249
50 Waterloo Road, Room 131
Thursday 2.00 - 4.00

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

Student Responsibilities

Be familiar with University policy and College procedures and act in accordance with those policies and procedures.

It is the responsibility of the student to retain a copy of any work submitted. Students must produce these documents upon request. Copies should be retained until the end of the grade appeal period each term.

The student is to perform the required due diligence for their assessment grade and rectify as soon as possible upon finding any errors.

Late Assessment Submission Penalty

Students enrolled in Session-based units with written assessments will have the following university standard late penalty applied. Please see https://students.mq.edu.au/study/assessment-exams/assessments for more information.

Unless a Special Consideration request has been submitted and approved, a 5% penalty (of the total possible mark) will be applied each day a written assessment is not submitted, up until the 7th day (including weekends). After the 7th day, a grade of '0' will be awarded even if the assessment is submitted. Submission time for all written assessments is set at 11:55 pm. A 1-hour grace period is provided to students who experience a technical concern.

For any late submission of time-sensitive tasks, such as scheduled tests/exams, performance assessments/presentations, and/or scheduled practical assessments/labs, students need to submit an application for Special Consideration.

Practical Component

Attendance of practical classes is mandatory before submitting the lab report. Lab reports submitted without attending the practical session will get a grade of '0' even if the assessment is submitted by the due date. A special consideration request must be submitted and approved if any student is unable to attend a practical session to organize alternative arrangements.

Resubmission option

Resubmission of any assessment task is not allowed under any circumstances.
Notifications

Formal notification of assessment tasks, grading rubrics, and due dates will be posted on iLearn. Although all reasonable measures to ensure the information is accurate, The University reserves the right to make changes without notice. Each student is responsible for checking iLearn for changes and updates.

Report and Assignment Tasks

Assignment Problems will be posted on iLearn at least one week before their submission date. Assignment solutions will be posted within a week after the submission date. Submissions will not be accepted once the solution is posted.

Assignment submissions and plagiarism policies

All assignments and reports must be submitted electronically through iLearn (in pdf format). Submissions will undergo plagiarism checkers using the Turnitin software and any work deemed to have a 30% or higher similarity score may incur an academic penalty. For more details on the policies of academic penalties relating to academic honesty, please refer to the policies and procedures section below.

Submissions are expected to be typed set in a logical layout and sequence. Markers WILL NOT grade poorly organized or illegible scans or drafts. The expected workload includes the preparation of final copies and clear diagrams.

Grading and passing requirements for unit

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

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).

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

ASSESSMENT GRADES AND STATUS

<table>
<thead>
<tr>
<th>GRADE</th>
<th>RANGE</th>
<th>STATUS (‘Standard Grade’ in AMIS)</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>HD</td>
<td>85-100</td>
<td>Pass</td>
<td>Provides consistent evidence of deep and critical understanding in relation to the learning outcomes. There is substantial originality, insight, or creativity in identifying, generating, and communicating competing arguments, perspectives or problem-solving approaches; critical evaluation of problems, their solutions, and their implications; creativity in the application as appropriate to the program.</td>
</tr>
</tbody>
</table>
Assessment Tasks

<table>
<thead>
<tr>
<th>Name</th>
<th>Weighting</th>
<th>Hurdle</th>
<th>Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Project Presentation</td>
<td>10%</td>
<td>No</td>
<td>Week 13</td>
</tr>
<tr>
<td>Demonstration of software skills</td>
<td>10%</td>
<td>No</td>
<td>Week 9</td>
</tr>
<tr>
<td>Case studies</td>
<td>30%</td>
<td>No</td>
<td>Week 7, Week 9, Week 12</td>
</tr>
<tr>
<td>Project planning presentation</td>
<td>10%</td>
<td>No</td>
<td>Week 10</td>
</tr>
<tr>
<td>Group project report</td>
<td>40%</td>
<td>No</td>
<td>Week 13</td>
</tr>
</tbody>
</table>

**Group Project Presentation**

Assessment Type 1: Presentation  
Indicative Time on Task 2: 16 hours  
Due: **Week 13**  
Weighting: **10%**

Final 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.

**Demonstration of software skills**

Assessment Type 1: Demonstration  
Indicative Time on Task 2: 10 hours  
Due: **Week 9**  
Weighting: **10%**

Demonstration of specific software skills to be conducted during the workshop.

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 7, Week 9, 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.

**Project planning presentation**

Assessment Type 1: Presentation  
Indicative Time on Task 2: 10 hours  
Due: Week 10  
Weighting: 10%

Project planning 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.

**Group project report**

Assessment Type 1: Report  
Indicative Time on Task 2: 16 hours  
Due: Week 13
Weighting: 40%

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.

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)

Books:

1. Management for Engineers, Scientist, and Technologists, by John Chelsom, Andrew Payne, Lawrence Reavill, Publisher - John Wiley and Sons
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). 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 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://stu
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 Advocacy provides independent advice on MQ policies, procedures, and processes

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

<table>
<thead>
<tr>
<th>EA Competency Standard</th>
<th>Unit Learning Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Knowledge and Skill Base</strong></td>
<td></td>
</tr>
<tr>
<td>1.1 Comprehensive, theory-based understanding of the underpinning fundamentals applicable to the engineering discipline.</td>
<td></td>
</tr>
<tr>
<td>1.2 Conceptual understanding of underpinning maths, analysis, statistics, computing.</td>
<td></td>
</tr>
<tr>
<td>1.3 In-depth understanding of specialist bodies of knowledge</td>
<td>UL01, UL02, UL03, UL04</td>
</tr>
<tr>
<td>1.4 Discernment of knowledge development and research directions</td>
<td></td>
</tr>
<tr>
<td>1.5 Knowledge of engineering design practice</td>
<td></td>
</tr>
<tr>
<td>1.6 Understanding of scope, principles, norms, accountabilities of sustainable engineering practice.</td>
<td>UL01, UL02, UL03</td>
</tr>
<tr>
<td><strong>Engineering Application Ability</strong></td>
<td></td>
</tr>
<tr>
<td>2.1 Application of established engineering methods to complex problem solving</td>
<td></td>
</tr>
<tr>
<td>2.2 Fluent application of engineering techniques, tools and resources.</td>
<td>UL04</td>
</tr>
<tr>
<td>2.3 Application of systematic engineering synthesis and design processes.</td>
<td></td>
</tr>
<tr>
<td>2.4 Application of systematic approaches to the conduct and management of engineering projects.</td>
<td>UL01, UL02, UL03, UL04</td>
</tr>
<tr>
<td><strong>Professional and Personal Attributes</strong></td>
<td></td>
</tr>
<tr>
<td>3.1 Ethical conduct and professional accountability.</td>
<td>UL01, UL02, UL03, UL04</td>
</tr>
<tr>
<td>3.2 Effective oral and written communication in professional and lay domains.</td>
<td>UL01, UL02, UL03, UL04</td>
</tr>
<tr>
<td>3.3 Creative, innovative and pro-active demeanour.</td>
<td></td>
</tr>
<tr>
<td>3.4 Professional use and management of information.</td>
<td>UL01, UL02, UL03, UL04</td>
</tr>
<tr>
<td>3.5 Orderly management of self, and professional conduct.</td>
<td>UL01, UL02, UL03, UL04</td>
</tr>
<tr>
<td>3.6 Effective team membership and team leadership</td>
<td>UL01, UL02, UL03, UL04</td>
</tr>
</tbody>
</table>