



ENGG801

Engineering Management Thesis

S2 Evening 2014

Dept of Engineering

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General Information

Unit convenor and teaching staff

Unit Convenor

Eryk Dutkiewicz

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Contact via eryk.dutkiewicz@mq.edu.au

Credit points

4

Prerequisites

Admission to MEngMgt

Corequisites

Co-badged status

Unit description

Students in this unit will complete a major project in the field of engineering management, under the supervision of an academic member of staff. Where the work is carried out externally a suitable, industrially-based co-supervisor may be required. At the end of the work a comprehensive research report will be submitted.

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:

Ability to undertake a major engineering project from conception to completion, involving literature search, design, problem solving and demonstration of outcomes.

Ability to produce a detailed professional report describing the project activities and outcomes.

Ability to incorporate into the project activities social, economic and environmental influences and outcomes.

Ability to understand processes, and procedures involved in an engineering project in an industrial or academic setting.

Assessment Tasks

Name	Weighting	Due
<u>Progress Report</u>	10%	14 September 2014
<u>Final Report</u>	70%	16 November 2014
<u>Presentation, Demo and Poster</u>	20%	3 December 2014

Progress Report

Due: **14 September 2014**

Weighting: **10%**

The detailed requirements are available in the slides of the first lecture.

On successful completion you will be able to:

- Ability to undertake a major engineering project from conception to completion, involving literature search, design, problem solving and demonstration of outcomes.
- Ability to incorporate into the project activities social, economic and environmental influences and outcomes.
- Ability to understand processes, and procedures involved in an engineering project in an industrial or academic setting.

Final Report

Due: **16 November 2014**

Weighting: **70%**

The detailed requirements are available in the slides of the first lecture.

On successful completion you will be able to:

- Ability to undertake a major engineering project from conception to completion, involving literature search, design, problem solving and demonstration of outcomes.
- Ability to produce a detailed professional report describing the project activities and outcomes.
- Ability to incorporate into the project activities social, economic and environmental influences and outcomes.
- Ability to understand processes, and procedures involved in an engineering project in an industrial or academic setting.

Presentation, Demo and Poster

Due: **3 December 2014**

Weighting: **20%**

Each presenter will be allocated 20 mins for the talk plus 5 mins for Q&A

On successful completion you will be able to:

- Ability to undertake a major engineering project from conception to completion, involving literature search, design, problem solving and demonstration of outcomes.
- Ability to incorporate into the project activities social, economic and environmental influences and outcomes.
- Ability to understand processes, and procedures involved in an engineering project in an industrial or academic setting.

Delivery and Resources

The students need to talk to their supervisors on the project related resources.

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](#). Students should be aware of the following policies in particular with regard to Learning and Teaching:

Academic Honesty Policy http://mq.edu.au/policy/docs/academic_honesty/policy.html

Assessment Policy <http://mq.edu.au/policy/docs/assessment/policy.html>

Grading Policy <http://mq.edu.au/policy/docs/grading/policy.html>

Grade Appeal Policy <http://mq.edu.au/policy/docs/gradeappeal/policy.html>

Grievance Management Policy http://mq.edu.au/policy/docs/grievance_management/policy.html

Disruption to Studies Policy http://www.mq.edu.au/policy/docs/disruption_studies/policy.html *The Disruption to Studies Policy is effective from March 3 2014 and replaces the Special Consideration Policy.*

In addition, a number of other policies can be found in the [Learning and Teaching Category](#) of Policy Central.

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/support/student_conduct/

Student Support

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

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to improve your marks and take control of your study.

- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module for Students](#)
- [Ask a Learning Adviser](#)

Student Services and Support

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

Student Enquiries

For all student enquiries, visit Student Connect at ask.mq.edu.au

IT Help

For help with University computer systems and technology, visit <http://informatics.mq.edu.au/help/>.

When using the University's IT, you must adhere to the [Acceptable Use Policy](#). The policy applies to all who connect to the MQ network including students.

Graduate Capabilities

PG - Discipline Knowledge and Skills

Our postgraduates will be able to demonstrate a significantly enhanced depth and breadth of knowledge, scholarly understanding, and specific subject content knowledge in their chosen fields.

This graduate capability is supported by:

Learning outcomes

- Ability to undertake a major engineering project from conception to completion, involving literature search, design, problem solving and demonstration of outcomes.
- Ability to produce a detailed professional report describing the project activities and outcomes.
- Ability to incorporate into the project activities social, economic and environmental

influences and outcomes.

- Ability to understand processes, and procedures involved in an engineering project in an industrial or academic setting.

Assessment tasks

- Progress Report
- Final Report
- Presentation, Demo and Poster

PG - Critical, Analytical and Integrative Thinking

Our postgraduates will be capable of utilising and reflecting on prior knowledge and experience, of applying higher level critical thinking skills, and of integrating and synthesising learning and knowledge from a range of sources and environments. A characteristic of this form of thinking is the generation of new, professionally oriented knowledge through personal or group-based critique of practice and theory.

This graduate capability is supported by:

Learning outcomes

- Ability to undertake a major engineering project from conception to completion, involving literature search, design, problem solving and demonstration of outcomes.
- Ability to produce a detailed professional report describing the project activities and outcomes.
- Ability to incorporate into the project activities social, economic and environmental influences and outcomes.
- Ability to understand processes, and procedures involved in an engineering project in an industrial or academic setting.

Assessment tasks

- Progress Report
- Final Report
- Presentation, Demo and Poster

PG - Research and Problem Solving Capability

Our postgraduates will be capable of systematic enquiry; able to use research skills to create new knowledge that can be applied to real world issues, or contribute to a field of study or practice to enhance society. They will be capable of creative questioning, problem finding and problem solving.

This graduate capability is supported by:

Learning outcomes

- Ability to undertake a major engineering project from conception to completion, involving literature search, design, problem solving and demonstration of outcomes.
- Ability to produce a detailed professional report describing the project activities and outcomes.
- Ability to understand processes, and procedures involved in an engineering project in an industrial or academic setting.

Assessment tasks

- Progress Report
- Final Report
- Presentation, Demo and Poster

PG - Effective Communication

Our postgraduates will be able to communicate effectively and convey their views to different social, cultural, and professional audiences. They will be able to use a variety of technologically supported media to communicate with empathy using a range of written, spoken or visual formats.

This graduate capability is supported by:

Learning outcomes

- Ability to undertake a major engineering project from conception to completion, involving literature search, design, problem solving and demonstration of outcomes.
- Ability to produce a detailed professional report describing the project activities and outcomes.
- Ability to incorporate into the project activities social, economic and environmental influences and outcomes.
- Ability to understand processes, and procedures involved in an engineering project in an industrial or academic setting.

Assessment tasks

- Progress Report
- Final Report
- Presentation, Demo and Poster

PG - Engaged and Responsible, Active and Ethical Citizens

Our postgraduates will be ethically aware and capable of confident transformative action in relation to their professional responsibilities and the wider community. They will have a sense of

connectedness with others and country and have a sense of mutual obligation. They will be able to appreciate the impact of their professional roles for social justice and inclusion related to national and global issues

This graduate capability is supported by:

Learning outcomes

- Ability to undertake a major engineering project from conception to completion, involving literature search, design, problem solving and demonstration of outcomes.
- Ability to incorporate into the project activities social, economic and environmental influences and outcomes.
- Ability to understand processes, and procedures involved in an engineering project in an industrial or academic setting.

Assessment tasks

- Progress Report
- Final Report
- Presentation, Demo and Poster

PG - Capable of Professional and Personal Judgment and Initiative

Our postgraduates will demonstrate a high standard of discernment and common sense in their professional and personal judgment. They will have the ability to make informed choices and decisions that reflect both the nature of their professional work and their personal perspectives.

This graduate capability is supported by:

Learning outcomes

- Ability to undertake a major engineering project from conception to completion, involving literature search, design, problem solving and demonstration of outcomes.
- Ability to produce a detailed professional report describing the project activities and outcomes.
- Ability to incorporate into the project activities social, economic and environmental influences and outcomes.
- Ability to understand processes, and procedures involved in an engineering project in an industrial or academic setting.

Assessment tasks

- Progress Report
- Final Report
- Presentation, Demo and Poster