ENGG806

Engineering Project 2

S2 Evening 2017

Dept of Engineering

Contents

General Information

Unit convenor and teaching staff
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Credit points
4

Prerequisites
Admission to MEng

Corequisites
ENGG805

Co-badged status

Unit description
Students in this unit will undertake a major project in the field of engineering, 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. The communication vehicle for this unit is primarily focused on external, public engineering project team communications as would be found at an engineering conference or symposium or for a customer or supplier in the engineering design/supply chain.

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 an engineering specific research project involving the development of new knowledge using intellectual independence, data management and synthesis,

critical analysis and interpretation of results, while demonstrating the ability to identify, formulate and solve engineering problems in an ethical manner using established engineering methods, processes, and procedures; culminating in a professional written report.

Ability to lead convincing arguments; demonstrating the application of engineering methods, and communicating complex information to a variety of audiences.

General Assessment Information

Notifications

Formal notification of assessment tasks, grading rubrics and due dates will be posted on iLearn. Although all reasonable measures are taken 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 Submissions

All 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 30% or higher similarity score may incur 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. The expected workload includes preparation of final copies and clear diagrams.

Late submissions

Late submissions will not be accepted without prior arrangement made at least one week before the submission date. Extenuating circumstances will be considered upon lodgement of a formal notice of disruption of studies.

Grading and passing requirement for unit

For further details about grading, please refer below in 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).

Student Responsibilities

Be familiar with University policy and College procedures and act in accordance with those policy 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. Student is to perform the required due diligent for their assessment grade and rectify as soon as possible upon finding any errors.

Assessment Tasks

Name	Weighting	Hurdle	Due
Progress Report	20%	No	Week 7
Project Report	60%	No	Week 13
Seminar	20%	No	Week 13

Progress Report

Due: **Week 7**
Weighting: **20%**

Detailed guidelines will be available in iLearn.

On successful completion you will be able to:

- Ability to undertake an engineering specific research project involving the development of new knowledge using intellectual independence, data management and synthesis, critical analysis and interpretation of results, while demonstrating the ability to identify, formulate and solve engineering problems in an ethical manner using established engineering methods, processes, and procedures; culminating in a professional written report.

Project Report

Due: **Week 13**
Weighting: **60%**

Detailed guidelines will be available in iLearn.

On successful completion you will be able to:

- Ability to undertake an engineering specific research project involving the development of new knowledge using intellectual independence, data management and synthesis, critical analysis and interpretation of results, while demonstrating the ability to identify, formulate and solve engineering problems in an ethical manner using established engineering methods, processes, and procedures; culminating in a professional written report.
- Ability to lead convincing arguments; demonstrating the application of engineering methods, and communicating complex information to a variety of audiences.

Seminar

Due: **Week 13**
Weighting: **20%**

Detailed guidelines will be available in iLearn.

On successful completion you will be able to:

- Ability to lead convincing arguments; demonstrating the application of engineering methods, and communicating complex information to a variety of audiences.

Delivery and Resources

Unit Delivery

This unit is project-based. The students are required to work on an engineering project under direct supervision of an academic supervisor. This unit has no lectures, however, special lectures may be organised. Announcements related to special lectures will be made via iLearn.

Technology Used and Required

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

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.

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.

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_2016.html

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

Complaint Management Procedure for Students and Members of the Public http://www.mq.edu.au/policy/docs/complaint_management/procedure.html

Disruption to Studies Policy (in effect until Dec 4th, 2017): http://www.mq.edu.au/policy/docs/disruption_studies/policy.html

Special Consideration Policy (in effect from Dec 4th, 2017): https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policies/special-consideration

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/

Results

Results shown in *iLearn*, 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.

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://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.

Graduate Capabilities

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 an engineering specific research project involving the development of new knowledge using intellectual independence, data management and synthesis, critical analysis and interpretation of results, while demonstrating the ability to identify, formulate and solve engineering problems in an ethical manner using established engineering methods, processes, and procedures; culminating in a professional written report.
- Ability to lead convincing arguments; demonstrating the application of engineering methods, and communicating complex information to a variety of audiences.

Assessment tasks

- Progress Report
- Project Report
- Seminar

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 outcome

- Ability to undertake an engineering specific research project involving the development of new knowledge using intellectual independence, data management and synthesis, critical analysis and interpretation of results, while demonstrating the ability to identify, formulate and solve engineering problems in an ethical manner using established engineering methods, processes, and procedures; culminating in a professional written report.

Assessment tasks

- Progress Report
- Project Report

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 outcome

- Ability to undertake an engineering specific research project involving the development of new knowledge using intellectual independence, data management and synthesis, critical analysis and interpretation of results, while demonstrating the ability to identify, formulate and solve engineering problems in an ethical manner using established engineering methods, processes, and procedures; culminating in a professional written report.

Assessment tasks

- Progress Report
- Project Report

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 outcome

- Ability to undertake an engineering specific research project involving the development of new knowledge using intellectual independence, data management and synthesis, critical analysis and interpretation of results, while demonstrating the ability to identify, formulate and solve engineering problems in an ethical manner using established engineering methods, processes, and procedures; culminating in a professional written report.

Assessment tasks

- Progress Report
- Project Report

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 an engineering specific research project involving the development of new knowledge using intellectual independence, data management and synthesis, critical analysis and interpretation of results, while demonstrating the ability to identify, formulate and solve engineering problems in an ethical manner using established engineering methods, processes, and procedures; culminating in a professional written report.
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