



# ENEG14005 Engineering Honours Project Implementation

## Term 2 - 2020

Profile information current as at 26/04/2024 01:28 am

All details in this unit profile for ENEG14005 have been officially approved by CQU University and represent a learning partnership between the University and you (our student). The information will not be changed unless absolutely necessary and any change will be clearly indicated by an approved correction included in the profile.

## General Information

### Overview

As a student in the final year of your Bachelor of Engineering course, you will work independently to manage and implement a project (planned in ENEG14003) that allows you to demonstrate professional capabilities expected of graduating professional engineers. You will work and learn autonomously, communicate progress and prepare reports and presentations. You will conduct research to support your project decision-making, and you are required to demonstrate critical thinking and document sound analysis and judgement in project working documents and final reporting. You will solve technical problems that arise and evaluate project processes, outcomes and related learning experiences, and you will prepare a formal report, poster and project presentation. Note that if you completed the prerequisite Planning unit more than two terms ago then you need to check with your academic adviser to see if the project is still available.

### Details

Career Level: *Undergraduate*

Unit Level: *Level 4*

Credit Points: *12*

Student Contribution Band: *8*

Fraction of Full-Time Student Load: *0.25*

### Pre-requisites or Co-requisites

Prerequisite: ENEG14003 Engineering Honours Project Planning

Important note: Students enrolled in a subsequent unit who failed their pre-requisite unit, should drop the subsequent unit before the census date or within 10 working days of Fail grade notification. Students who do not drop the unit in this timeframe cannot later drop the unit without academic and financial liability. See details in the [Assessment Policy and Procedure \(Higher Education Coursework\)](#).

### Offerings For Term 2 - 2020

- Bundaberg
- Cairns
- Gladstone
- Mackay
- Online
- Rockhampton

### Attendance Requirements

All on-campus students are expected to attend scheduled classes – in some units, these classes are identified as a mandatory (pass/fail) component and attendance is compulsory. International students, on a student visa, must maintain a full time study load and meet both attendance and academic progress requirements in each study period (satisfactory attendance for International students is defined as maintaining at least an 80% attendance record).

### Website

[This unit has a website, within the Moodle system, which is available two weeks before the start of term. It is important that you visit your Moodle site throughout the term. Please visit Moodle for more information.](#)

## Class and Assessment Overview

### Recommended Student Time Commitment

Each 12-credit Undergraduate unit at CQUniversity requires an overall time commitment of an average of 25 hours of study per week, making a total of 300 hours for the unit.

### Class Timetable

#### [Regional Campuses](#)

Bundaberg, Cairns, Emerald, Gladstone, Mackay, Rockhampton, Townsville

#### [Metropolitan Campuses](#)

Adelaide, Brisbane, Melbourne, Perth, Sydney

### Assessment Overview

#### 1. **Presentation**

Weighting: 10%

#### 2. **Written Assessment**

Weighting: 10%

#### 3. **Written Assessment**

Weighting: 10%

#### 4. **Presentation**

Weighting: 10%

#### 5. **Thesis/Dissertation**

Weighting: 60%

### Assessment Grading

This is a graded unit: your overall grade will be calculated from the marks or grades for each assessment task, based on the relative weightings shown in the table above. You must obtain an overall mark for the unit of at least 50%, or an overall grade of 'pass' in order to pass the unit. If any 'pass/fail' tasks are shown in the table above they must also be completed successfully ('pass' grade). You must also meet any minimum mark requirements specified for a particular assessment task, as detailed in the 'assessment task' section (note that in some instances, the minimum mark for a task may be greater than 50%). Consult the [University's Grades and Results Policy](#) for more details of interim results and final grades.

## CQUniversity Policies

**All University policies are available on the [CQUniversity Policy site](#).**

You may wish to view these policies:

- Grades and Results Policy
- Assessment Policy and Procedure (Higher Education Coursework)
- Review of Grade Procedure
- Student Academic Integrity Policy and Procedure
- Monitoring Academic Progress (MAP) Policy and Procedure – Domestic Students
- Monitoring Academic Progress (MAP) Policy and Procedure – International Students
- Student Refund and Credit Balance Policy and Procedure
- Student Feedback – Compliments and Complaints Policy and Procedure
- Information and Communications Technology Acceptable Use Policy and Procedure

This list is not an exhaustive list of all University policies. The full list of University policies are available on the [CQUniversity Policy site](#).

## Previous Student Feedback

### Feedback, Recommendations and Responses

Every unit is reviewed for enhancement each year. At the most recent review, the following staff and student feedback items were identified and recommendations were made.

#### Feedback from Student Satisfaction Survey

**Feedback**

Academic advisers facilitate students to complete projects to a high standard.

**Recommendation**

Academics will be encouraged to continue helping their students.

#### Feedback from Student Satisfaction Survey

**Feedback**

The weekly Zoom sessions and recordings were useful to obtain assistance and to stay on track with the project.

**Recommendation**

Weekly Zoom sessions should be maintained to allow students and staff to discuss project matters promptly.

#### Feedback from Student Satisfaction Survey

**Feedback**

The assessment instructions are too vague, which makes it difficult for students and Academic Advisers to achieve the expectations.

**Recommendation**

Assessment rubrics should be created to articulate the expectations at various levels of achievement clearly.

#### Feedback from Student Satisfaction Survey

**Feedback**

The unit coordinator needs to be more accessible to students, to ensure timely guidance and resolution of project issues.

**Recommendation**

The unit coordinator should be more flexible with their availability to project students.

## Unit Learning Outcomes

**On successful completion of this unit, you will be able to:**

1. Apply and reflect on Engineers Australia's Stage One Competencies for Professional Engineers to the planning and implementation phases of engineering projects
2. Implement the project plan prepared in the Planning unit in consultation with and guidance from your project adviser(s)
3. Think critically, demonstrate sound analysis and make rational judgements and decisions in the implementation phases of your project
4. Communicate preliminary results to project adviser(s) promptly to solicit timely and constructive feedback
5. Prepare professional project documents that convey the processes and outcomes of your project
6. Communicate your project outcomes to project adviser(s), other stakeholders and the wider community.

By completing this unit and the preceding Planning unit each student will meet Engineers Australia's Stage One Competencies for Professional Engineers to a substantial degree.



## Textbooks and Resources

### Textbooks

ENEG14005

#### Supplementary

##### **The Thinker's Guide to Engineering Reasoning**

Edition: 2nd (2013)

Authors: Richard Paul, Dr. Robert Niewoehner and Linda Elder

Foundation for Critical Thinking

Tomales, CA, USA

ISBN: 978-0-9857544-1-9

Binding: Paperback

### IT Resources

#### You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- Presentation software such as MS Powerpoint
- Project management software such as MS Project
- Software specific to project
- Webcam and headset for on-line sessions.
- Word processing software such as MS Word

## Referencing Style

#### All submissions for this unit must use the referencing styles below:

- [Harvard \(author-date\)](#)
- [Turabian](#)

For further information, see the Assessment Tasks.

## Teaching Contacts

**Benjamin Taylor** Unit Coordinator

[ben.taylor@cqu.edu.au](mailto:ben.taylor@cqu.edu.au)

## Schedule

### Week 1 - 13 Jul 2020

Module/Topic	Chapter	Events and Submissions/Topic
Commence implementation of your project plan prepared in the Planning unit. Consult with your advisor(s) and decide if revisions to your scope and plan are necessary. Start preparing your project update presentation which is scheduled for week 5.		Share progress with advisor(s).

### Week 2 - 20 Jul 2020

Module/Topic	Chapter	Events and Submissions/Topic
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Continue working on your project as well as preparing your project update presentation which is scheduled for week 5.

Share progress with advisor(s).

### Week 3 - 27 Jul 2020

#### Module/Topic

#### Chapter

#### Events and Submissions/Topic

Continue working on your project as well as preparing your project update presentation which is scheduled for week 5.

Share progress with advisor(s).

### Week 4 - 03 Aug 2020

#### Module/Topic

#### Chapter

#### Events and Submissions/Topic

Continue working on your project as well as preparing your project update presentation which is scheduled for week 5.

Share progress with advisor(s).

### Week 5 - 10 Aug 2020

#### Module/Topic

#### Chapter

#### Events and Submissions/Topic

Present your project update presentation to your academic advisor and other academics in your discipline. Take notes from the advice and guidance given after your presentation.

Share progress with advisor(s).

**Project Update Presentation** Due: Week 5 Wednesday (12 Aug 2020) 1:00 pm AEST

### Vacation Week - 17 Aug 2020

#### Module/Topic

#### Chapter

#### Events and Submissions/Topic

If you have not already done so then commence work on your thesis layout. A good place to start is by drafting the likely headings and adding all the relevant sections from your project plan.

Share progress with advisor(s).

### Week 6 - 24 Aug 2020

#### Module/Topic

#### Chapter

#### Events and Submissions/Topic

Start thinking about your project poster, maybe research what a poster should look like and contain.

Share progress with advisor(s).

### Week 7 - 31 Aug 2020

#### Module/Topic

#### Chapter

#### Events and Submissions/Topic

Continue preparing your preliminary results. Check Moodle for the performance guidelines.

Share progress with advisor(s).

### Week 8 - 07 Sep 2020

#### Module/Topic

#### Chapter

#### Events and Submissions/Topic

Invite your academic advisor to provide guidance by submitting your preliminary results. You may also consider submitting your draft document to your industry advisor (if applicable).

Share progress with advisor(s).

**Preliminary Results** Due: Week 8 Monday (7 Sept 2020) 9:00 am AEST

### Week 9 - 14 Sep 2020

#### Module/Topic

#### Chapter

#### Events and Submissions/Topic

Discuss your project poster with your academic advisor.

Share progress with advisor(s).

## Week 10 - 21 Sep 2020

Module/Topic	Chapter	Events and Submissions/Topic
Use the advice and guidance from your project update presentation and preliminary results to refine your final submission, poster and final project presentation.		Share progress with advisor(s).

## Week 11 - 28 Sep 2020

Module/Topic	Chapter	Events and Submissions/Topic
Check Moodle for guidance on your thesis, poster and final project presentation. Review and reflect on your attainment of Engineers Australia's Stage One Competencies.		Share progress with advisor(s).  <b>Project Poster</b> Due: Week 11 Thursday (1 Oct 2020) 9:00 am AEST

## Week 12 - 05 Oct 2020

Module/Topic	Chapter	Events and Submissions/Topic
Your thesis and reflections should be finalised this week. Present your findings at the CQU Engineering Showcase which is scheduled for Wednesday of week 12.		Share progress with advisor(s).  <b>Final Project Presentation</b> Due: Week 12 Wednesday (7 Oct 2020) 1:00 pm AEST

## Review/Exam Week - 12 Oct 2020

Module/Topic	Chapter	Events and Submissions/Topic
Submit your thesis and reflections for assessment.		<b>Thesis</b> Due: Review/Exam Week Monday (12 Oct 2020) 9:00 am AEST

## Exam Week - 19 Oct 2020

Module/Topic	Chapter	Events and Submissions/Topic
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## Assessment Tasks

### 1 Project Update Presentation

#### Assessment Type

Presentation

#### Task Description

Prepare a ten-minute presentation which updates your academic advisor and other academics on your project progress. Further guidance to the required content of your presentation is in Moodle.

Presentations are via Zoom software only (i.e. no on-campus presentations). If you are not familiar with Zoom software then please ensure you do familiarise yourself with Zoom software before this date. Ensure you are located somewhere with a good internet connection so we can see you as well as your presentation slides. Be prepared to answer questions about your project and take further advice and guidance from the audience.

Presentations are scheduled for Wednesday week 5, 1-3pm and 6-8pm. Preference to the evening time slot is given to students enrolled in distance mode. Please add your name to your preferred time within the spreadsheet at the link to the proposed schedule in Moodle. Please note that access to the spreadsheet is by using your CQU email address and password (not your personal Gmail account).

You are expected to watch the other students presentations in your session so you can learn about presenting projects more effectively, from other students presentations as well as from the feedback and comments that other students receive.

Advice and guidance will be given verbally immediately after your presentation. Please take your own notes. A mark will be awarded in Moodle.

**Assessment Due Date**

Week 5 Wednesday (12 Aug 2020) 1:00 pm AEST

**Return Date to Students**

Advice and guidance will be given verbally immediately after your presentation. Please take your own notes. A mark will be awarded in Moodle.

**Weighting**

10%

**Minimum mark or grade**

1%

**Assessment Criteria**

Accuracy and clarity of presentation slides.

Appropriateness of presentation.

Duration of presentation.

Progress of project.

Answer any questions appropriately.

Performance guidelines for the assessment criteria will be available in Moodle.

**Referencing Style**

- [Harvard \(author-date\)](#)
- [Turabian](#)

**Submission**

No submission method provided.

**Submission Instructions**

No submission required. Just deliver your presentation at the scheduled time.

**Learning Outcomes Assessed**

- Implement the project plan prepared in the Planning unit in consultation with and guidance from your project adviser(s)
- Communicate preliminary results to project adviser(s) promptly to solicit timely and constructive feedback

**Graduate Attributes**

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Team Work
- Information Technology Competence
- Cross Cultural Competence
- Ethical practice

## 2 Preliminary Results

**Assessment Type**

Written Assessment

**Task Description**

Prepare a document with your preliminary project results. This document can be used to develop the results section of your final report.

**Assessment Due Date**

Week 8 Monday (7 Sept 2020) 9:00 am AEST

**Return Date to Students**

Week 10 Monday (21 Sept 2020)

**Weighting**

10%

**Minimum mark or grade**

1%

**Assessment Criteria**

Accuracy and clarity of the written document.



Appropriateness of the preliminary results.

Performance guidelines for the assessment criteria are available in Moodle.

### Referencing Style

- [Harvard \(author-date\)](#)
- [Turabian](#)

### Submission

Online

### Learning Outcomes Assessed

- Implement the project plan prepared in the Planning unit in consultation with and guidance from your project adviser(s)
- Communicate preliminary results to project adviser(s) promptly to solicit timely and constructive feedback

### Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Team Work
- Information Technology Competence
- Cross Cultural Competence
- Ethical practice

## 3 Project Poster

### Assessment Type

Written Assessment

### Task Description

Prepare a poster (in portrait orientation) which communicates your project results to the wider community. There is a template in Moodle at A3 size - please be aware that the poster will be printed at A1 size so please choose appropriate size fonts and images. If you submit by the due day and time then CQU will arrange for the poster to be printed at A1 size on the campus at which you present your final project presentation (in-person or via Zoom).

### Assessment Due Date

Week 11 Thursday (1 Oct 2020) 9:00 am AEST

### Return Date to Students

Review/Exam Week Thursday (15 Oct 2020)

### Weighting

10%

### Minimum mark or grade

1%

### Assessment Criteria

Accuracy and clarity of poster.

Appropriateness of poster for communication of project results.

Performance guidelines for the assessment criteria will be available in Moodle.

### Referencing Style

- [Harvard \(author-date\)](#)
- [Turabian](#)

### Submission

Online

### Learning Outcomes Assessed

- Prepare professional project documents that convey the processes and outcomes of your project
- Communicate your project outcomes to project adviser(s), other stakeholders and the wider community.

### Graduate Attributes

- Communication
- Problem Solving

- Critical Thinking
- Information Literacy
- Team Work
- Information Technology Competence
- Cross Cultural Competence
- Ethical practice

## 4 Final Project Presentation

### Assessment Type

Presentation

### Task Description

Prepare a ten-minute presentation which reviews your project and project outcomes. Deliver your presentation at the CQU Engineering Showcase on Wednesday week 12. Students are required to present their final project presentation in-person at one of the CQU Engineering campuses in Queensland; i.e. Bundaberg, Cairns City, Gladstone Marina, Mackay Ooralea or Rockhampton North. Students can decide to present at their campus of enrolment and/or at the campus at which their academic advisor is located (if in QLD). A form will be made available in Moodle for students to indicate which campus they will present at. No extensions are possible - if you miss your presentation then you will be rescheduled to present at the following Engineering Showcase in the next term of offering.

### Assessment Due Date

Week 12 Wednesday (7 Oct 2020) 1:00 pm AEST

### Return Date to Students

### Weighting

10%

### Minimum mark or grade

50%

### Assessment Criteria

Accuracy and clarity of presentation slides.

Appropriateness of presentation.

Duration of presentation.

Communication of project results.

Answer any questions appropriately.

Performance guidelines for the assessment criteria will be available in Moodle.

### Referencing Style

- [Harvard \(author-date\)](#)
- [Turabian](#)

### Submission

No submission method provided.

### Submission Instructions

No submission required. Just deliver your presentation at the scheduled time.

### Learning Outcomes Assessed

- Apply and reflect on Engineers Australia's Stage One Competencies for Professional Engineers to the planning and implementation phases of engineering projects
- Think critically, demonstrate sound analysis and make rational judgements and decisions in the implementation phases of your project
- Communicate your project outcomes to project adviser(s), other stakeholders and the wider community.

### Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Team Work
- Information Technology Competence
- Cross Cultural Competence
- Ethical practice

## 5 Thesis

### Assessment Type

Thesis/Dissertation

### Task Description

Prepare a thesis which communicates your project and results effectively. The first appendix of your thesis should contain your reflections on your attainment of the Engineers Australia's Stage One Competencies and demonstrate that you have applied a substantial degree of Engineers Australia's Stage One Competencies to the implementation phases of your project.

Your thesis should be structured as follows with each section starting on a new page:

- Title page
- Summary
- Acknowledgments
- Table of Contents
- List of Figures
- List of Tables
- Glossary/Nomenclature
- Introduction to the Project and Thesis
- Literature Review
- Project Methodology Review
- Results and Discussion
- Conclusion
- Appendix 1 - Reflections on your attainment of Engineers Australias Stage One Competencies
- Other appendices as appropriate (please note that other appendices will not be graded)

Further guidance and other resources are available in Moodle.

### Assessment Due Date

Review/Exam Week Monday (12 Oct 2020) 9:00 am AEST

Submit as one document in Moodle.

### Return Date to Students

At certification of grades

### Weighting

60%

### Minimum mark or grade

50%

### Assessment Criteria

Accuracy and clarity of thesis and reflections

Appropriateness of thesis and reflections

Performance guidelines for the assessment criteria are available in Moodle.

### Referencing Style

- [Harvard \(author-date\)](#)
- [Turabian](#)

### Submission

Online

### Submission Instructions

Submit as one PDF document.

### Learning Outcomes Assessed

- Apply and reflect on Engineers Australia's Stage One Competencies for Professional Engineers to the planning and implementation phases of engineering projects
- Think critically, demonstrate sound analysis and make rational judgements and decisions in the implementation phases of your project
- Prepare professional project documents that convey the processes and outcomes of your project

## Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Team Work
- Information Technology Competence
- Cross Cultural Competence
- Ethical practice

## Academic Integrity Statement

As a CQUniversity student you are expected to act honestly in all aspects of your academic work.

Any assessable work undertaken or submitted for review or assessment must be your own work. Assessable work is any type of work you do to meet the assessment requirements in the unit, including draft work submitted for review and feedback and final work to be assessed.

When you use the ideas, words or data of others in your assessment, you must thoroughly and clearly acknowledge the source of this information by using the correct referencing style for your unit. Using others' work without proper acknowledgement may be considered a form of intellectual dishonesty.

Participating honestly, respectfully, responsibly, and fairly in your university study ensures the CQUniversity qualification you earn will be valued as a true indication of your individual academic achievement and will continue to receive the respect and recognition it deserves.

As a student, you are responsible for reading and following CQUniversity's policies, including the [Student Academic Integrity Policy and Procedure](#). This policy sets out CQUniversity's expectations of you to act with integrity, examples of academic integrity breaches to avoid, the processes used to address alleged breaches of academic integrity, and potential penalties.

### **What is a breach of academic integrity?**

A breach of academic integrity includes but is not limited to plagiarism, self-plagiarism, collusion, cheating, contract cheating, and academic misconduct. The Student Academic Integrity Policy and Procedure defines what these terms mean and gives examples.

### **Why is academic integrity important?**

A breach of academic integrity may result in one or more penalties, including suspension or even expulsion from the University. It can also have negative implications for student visas and future enrolment at CQUniversity or elsewhere. Students who engage in contract cheating also risk being blackmailed by contract cheating services.

### **Where can I get assistance?**

For academic advice and guidance, the [Academic Learning Centre \(ALC\)](#) can support you in becoming confident in completing assessments with integrity and of high standard.

### **What can you do to act with integrity?**



### **Be Honest**

If your assessment task is done by someone else, it would be dishonest of you to claim it as your own



### **Seek Help**

If you are not sure about how to cite or reference in essays, reports etc, then seek help from your lecturer, the library or the Academic Learning Centre (ALC)



### **Produce Original Work**

Originality comes from your ability to read widely, think critically, and apply your gained knowledge to address a question or problem