



# ENRP20003 Engineering Research Project Implementation

## Term 1 - 2021

Profile information current as at 29/04/2024 06:17 am

All details in this unit profile for ENRP20003 have been officially approved by CQUniversity 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

This unit is designed so that students can complete an investigative study through the analysis of, reflection on and critique of, an area of their professional practice that was commenced in Engineering Research Project Planning. By completing this project, students will contribute to the body of knowledge for their discipline. Students will present their project in a thesis and a professional presentation.

### Details

Career Level: *Postgraduate*

Unit Level: *Level 9*

Credit Points: *12*

Student Contribution Band: *8*

Fraction of Full-Time Student Load: *0.25*

### Pre-requisites or Co-requisites

Prerequisite: ENRP20001 Engineering Research 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 1 - 2021

- Melbourne
- Online
- Perth
- 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 Postgraduate 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. **Report**

Weighting: 20%

#### 2. **Presentation**

Weighting: 20%

#### 3. **Portfolio**

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 Self-reflection and informal discussion with student

**Feedback**

Academic Integrity

**Recommendation**

All assessments with similarity scores above a minimum threshold must be investigated for academic misconduct.

#### Feedback from Self-reflections

**Feedback**

Student supervisor interactions

**Recommendation**

Interaction with supervisor and students is important and regular weekly meetings are one way of ensuring this. Weekly meetings should be made compulsory.

#### Feedback from Unit evaluation and self-reflection

**Feedback**

Feedback quality and return time

**Recommendation**

Supervisors and reviewers shall be asked and reminded of the quality and timely feedback. The Unit Coordinator should check and ensure the quality of feedback.

## Unit Learning Outcomes

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

1. Implement the project plan prepared in the planning unit with consultation and guidance from your project advisers and stakeholders
2. Think critically, demonstrate sound analysis, and make rational, justifiable decisions in order to find the optimal, sustainable solution
3. Demonstrate leadership by contributing to the body of knowledge related to the discipline area and participating in professional networks
4. Communicate preliminary results to stakeholders through interim and regular progress reports to solicit timely and constructive feedback
5. Communicate findings using written and oral methods to inform both internal and external workplace practising professionals
6. Critically reflect on self-performance and develop a plan for lifelong and professional learning.

The Learning Outcomes for this unit are linked with the Engineers Australia Stage 1 Competency Standards for Professional Engineers in the areas of 1. Knowledge and Skill Base, 2. Engineering Application Ability and 3. Professional and Personal Attributes at the following levels:

#### Advanced

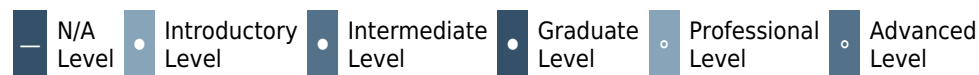
- 1.1 Comprehensive, theory-based understanding of the underpinning natural and physical sciences and the engineering fundamentals applicable to the engineering discipline. (LO: 2A )
- 1.2 Conceptual understanding of the mathematics, numerical analysis, statistics, and computer and information sciences which underpin the engineering discipline. (LO: 2A )
- 1.3 In-depth understanding of specialist bodies of knowledge within the engineering discipline. (LO: 2A )
- 1.4 Discernment of knowledge development and research directions within the engineering discipline. (LO: 2A )
- 1.5 Knowledge of engineering design practice and contextual factors impacting the engineering discipline. (LO: 2A )
- 1.6 Understanding of the scope, principles, norms, accountabilities and bounds of sustainable engineering practice in the specific discipline. (LO: 1A 3A )
- 2.1 Application of established engineering methods to complex engineering problem solving. (LO: 1A 2A )
- 2.2 Fluent application of engineering techniques, tools and resources. (LO: 1A 2A )
- 2.3 Application of systematic engineering synthesis and design processes. (LO: 1A 2A )
- 2.4 Application of systematic approaches to the conduct and management of engineering projects. (LO: 1A )
- 3.1 Ethical conduct and professional accountability. (LO: 2A 6A )
- 3.2 Effective oral and written communication in professional and lay domains. (LO: 3A 4A 5A )
- 3.3 Creative, innovative and pro-active demeanour. (LO: 2A )
- 3.4 Professional use and management of information. (LO: 2A 4A 5A )
- 3.5 Orderly management of self, and professional conduct. (LO: 6A )

*Note: LO refers to the Learning Outcome number(s) which link to the competency and the levels: N - Introductory, I - Intermediate and A - Advanced.*

Refer to the Engineering Postgraduate Units Moodle site for further information on the Engineers Australia's Stage 1 Competency Standard for Professional Engineers and course level mapping information

<https://moodle.cqu.edu.au/course/view.php?id=11382>

## Alignment of Learning Outcomes, Assessment and Graduate Attributes



### Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes					
	1	2	3	4	5	6
<b>1 - Report - 20%</b>	•			•		•

Assessment Tasks	Learning Outcomes					
	1	2	3	4	5	6
2 - Presentation - 20%		•	•		•	
3 - Portfolio - 60%	•	•	•	•	•	

## Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes					
	1	2	3	4	5	6
1 - Knowledge		○	○		○	○
2 - Communication	○		○	○	○	○
3 - Cognitive, technical and creative skills	○	○	○		○	○
4 - Research	○	○	○	○	○	○
5 - Self-management			○		○	○
6 - Ethical and Professional Responsibility		○	○	○		○
7 - Leadership		○	○	○		○
8 - Aboriginal and Torres Strait Islander Cultures						

## Alignment of Assessment Tasks to Graduate Attributes

Assessment Tasks	Graduate Attributes							
	1	2	3	4	5	6	7	8
1 - Report - 20%	○	○	○	○	○			
2 - Presentation - 20%	○	○	○	○		○	○	
3 - Portfolio - 60%	○	○	○	○		○	○	

## Textbooks and Resources

### Textbooks

**There are no required textbooks.**

### IT Resources

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

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)

## Referencing Style

All submissions for this unit must use the referencing style: [Harvard \(author-date\)](#)  
For further information, see the Assessment Tasks.

## Teaching Contacts

**Narottam Das** Unit Coordinator  
[n.das@cqu.edu.au](mailto:n.das@cqu.edu.au)

## Schedule

### Week 1 - 08 Mar 2021

Module/Topic	Chapter	Events and Submissions/Topic
Organise a weekly meeting time and place/zoom with your advisor. Discuss with your advisor on how to address the feedback, advice and guidance given on your planning report by reviewers. Prepare a new project plan if required. Commence implementation of your project plan. Prepare project report layout.		Meet with your advisor on a weekly basis and share your progress in the meeting. You are required to keep the meeting records and forward to your advisor after the meeting every week.

### Week 2 - 15 Mar 2021

Module/Topic	Chapter	Events and Submissions/Topic
Report: Work on introduction and objectives		Meet with your advisor on a weekly basis and share your progress in the meeting. You are required to keep the meeting records and forward to your advisor after the meeting every week.

### Week 3 - 22 Mar 2021

Module/Topic	Chapter	Events and Submissions/Topic
Report: Work on literature review		Meet with your advisor on a weekly basis and share your progress in the meeting. You are required to keep the meeting records and forward to your advisor after the meeting every week.

### Week 4 - 29 Mar 2021

Module/Topic	Chapter	Events and Submissions/Topic
--------------	---------	------------------------------

Report: Work on research methodology

Meet with your advisor on a weekly basis and share your progress in the meeting. You are required to keep the meeting records and forward to your advisor after the meeting every week.

#### Week 5 - 05 Apr 2021

Module/Topic	Chapter	Events and Submissions/Topic
Start thinking on how your results can be presented and analysed to make it useful to stakeholders.		Meet with your advisor on a weekly basis and share your progress in the meeting. You are required to keep the meeting records and forward to your advisor after the meeting every week.

#### Vacation Week - 12 Apr 2021

Module/Topic	Chapter	Events and Submissions/Topic
Keep working on your project		

#### Week 6 - 19 Apr 2021

Module/Topic	Chapter	Events and Submissions/Topic
Report: Prepare preliminary results document Show a draft report to your project advisor for comments.		Meet with your advisor on a weekly basis and share your progress in the meeting. You are required to keep the meeting records and forward to your advisor after the meeting every week.

#### Week 7 - 26 Apr 2021

Module/Topic	Chapter	Events and Submissions/Topic
Submit the preliminary results document. Report: Work on Results and discussion		Meet with your advisor on a weekly basis and share your progress in the meeting. You are required to keep the meeting records and forward to your advisor after the meeting every week.  <b>Preliminary Results</b> Due: Week 7 Monday (26 Apr 2021) 11:59 am AEST

#### Week 8 - 03 May 2021

Module/Topic	Chapter	Events and Submissions/Topic
Keep working on your project and the report.		Meet with your advisor on a weekly basis and share your progress in the meeting. You are required to keep the meeting records and forward to your advisor after the meeting every week.

#### Week 9 - 10 May 2021

Module/Topic	Chapter	Events and Submissions/Topic
Keep working on your project and the report.		Meet with your advisor on a weekly basis and share your progress in the meeting. You are required to keep the meeting records and forward to your advisor after the meeting every week.

#### Week 10 - 17 May 2021

Module/Topic	Chapter	Events and Submissions/Topic
Prepare for the final project presentation. You should present to your supervisor during this week's meeting and seek their advice and guidance to improve.		Meet with your advisor on a weekly basis and share your progress in the meeting. You are required to keep the meeting records and forward to your advisor after the meeting every week.

#### Week 11 - 24 May 2021

Module/Topic	Chapter	Events and Submissions/Topic
--------------	---------	------------------------------

Work on your thesis and presentation slides.

Meet with your advisor on a weekly basis and share your progress in the meeting. You are required to keep the meeting records and forward to your advisor after the meeting every week.

## Week 12 - 31 May 2021

### Module/Topic

### Chapter

### Events and Submissions/Topic

Complete your thesis and submit.  
Present your project.

**Presentation** Due: Week 12 Monday (31 May 2021) 11:59 am AEST  
**Thesis** Due: Week 12 Friday (4 June 2021) 11:59 am AEST

## Assessment Tasks

### 1 Preliminary Results

#### Assessment Type

Report

#### Task Description

Prepare a document with your preliminary project results and discussion. Even though the result section carries higher marks, the document should include:

- Title page
- Abstract
- Keywords
- Introduction and Background
- Objective/s of Research
- Literature Review
- Methodology
- Results and Discussion
- Conclusion and Future Works
- List of References
- Appendix (if applicable)
- Responses to oral and written feedback, comments and advice given by reviewers in planning the term and by your advisor during this term.

#### Assessment Due Date

Week 7 Monday (26 Apr 2021) 11:59 am AEST

#### Return Date to Students

Week 9 Monday (10 May 2021)

#### Weighting

20%

#### Assessment Criteria

The extent to which:

- feedback, advice and comments are responded.
- project background and context are used to justify the project.
- literature is used to support the project.
- objectives are clearly outlined.
- appropriate methodology is used.
- preliminary results are correct and properly presented.

*The focus of this report is on preliminary results so the results section carries higher marks. Detailed assessment criteria will be available on the course website.*

#### Referencing Style

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



**Submission**

Online

**Submission Instructions**

pdf file

**Learning Outcomes Assessed**

- Implement the project plan prepared in the Planning unit with consultation and guidance from your project advisers and stakeholders
- Communicate preliminary results to stakeholders through interim and regular progress reports to solicit timely and constructive feedback
- Critically reflect on self-performance and develop a plan for lifelong and professional learning.

**Graduate Attributes**

- Knowledge
- Communication
- Cognitive, technical and creative skills
- Research
- Self-management

## 2 Presentation

**Assessment Type**

Presentation

**Task Description**

Prepare a ten-minute presentation to show your project findings followed by 5 minutes of Q&A session. This assessment generally cannot be rescheduled as this has to be delivered on a fixed date and location.

**Assessment Due Date**

Week 12 Monday (31 May 2021) 11:59 am AEST

Exact schedule of presentation will be available on the course website.

**Return Date to Students**

Feedback on the presentations will be provided immediately after the presentation. No written feedback will be given.

**Weighting**

20%

**Minimum mark or grade**

50%

**Assessment Criteria**

This assessment will be evaluated based on the following criteria

- Accuracy and clarity of presentation slides
- Technical knowledge
- Oral communication
- Answer to the questions
- Overall quality of the presentation

Detailed assessment criteria will be available on the course website.

**Referencing Style**

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

**Submission**

Online

**Submission Instructions**

Bring your presentation slides and deliver the presentation at your scheduled time.

**Learning Outcomes Assessed**

- Think critically, demonstrate sound analysis, and make rational, justifiable decisions in order to find the optimal, sustainable solution
- Demonstrate leadership by contributing to the body of knowledge related to the discipline area and participating in professional networks
- Communicate findings using written and oral methods to inform both internal and external workplace practicing

professionals

### **Graduate Attributes**

- Knowledge
- Communication
- Cognitive, technical and creative skills
- Research
- Ethical and Professional Responsibility
- Leadership

## **3 Thesis**

### **Assessment Type**

Portfolio

### **Task Description**

Submit the final thesis. The document should have the following sections:

- Title page
- Abstract
- Keywords
- Introduction and Background
- Aim and Objective/s of Research
- Literature Review
- Methodology
- Results and Discussion
- Conclusion
- References
- Appendix (if applicable)

### **Assessment Due Date**

Week 12 Friday (4 June 2021) 11:59 am AEST

### **Return Date to Students**

After the certification of grades.

### **Weighting**

60%

### **Minimum mark or grade**

50%

### **Assessment Criteria**

Thesis will be evaluated based on the overall quality of the project, analysis of results and written report. Detail assessment criteria (performance standard) will be available on the unit website.

### **Referencing Style**

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

### **Submission**

Online

### **Learning Outcomes Assessed**

- Implement the project plan prepared in the Planning unit with consultation and guidance from your project advisers and stakeholders
- Think critically, demonstrate sound analysis, and make rational, justifiable decisions in order to find the optimal, sustainable solution
- Demonstrate leadership by contributing to the body of knowledge related to the discipline area and participating in professional networks
- Communicate preliminary results to stakeholders through interim and regular progress reports to solicit timely and constructive feedback
- Communicate findings using written and oral methods to inform both internal and external workplace practicing professionals

### **Graduate Attributes**

- Knowledge
- Communication
- Cognitive, technical and creative skills
- Research
- Ethical and Professional Responsibility
- Leadership

## 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