ENRP20001 *Engineering Research Project Planning*
Term 1 - 2020

Profile information current as at 14/12/2025 03:36 pm

General Information

Overview

This unit is specifically designed so that students can apply the processes of research investigation through the analysis of, reflection on and critique of, an area of their professional practice. The unit uses a problem-based learning approach within an authentic workplace learning environment. This ensures students are undertaking an investigation that is relevant to the needs of industry. Students will apply an appropriate research methodology that suits their research problem. At the end of this unit, students will have developed a project plan that they will implement in the follow-on unit Engineering Research Project Implementation.

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

Students must have completed a minimum of 36 credit points and approval of head of course or delegate is required.
Students must have a project topic and academic supervisor before they can be enrolled.
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 - 2020

- Melbourne
- Mixed Mode
- 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: 10%
2. **Literature Review or Systematic Review**
Weighting: 20%
3. **Presentation**
Weighting: 20%
4. **Portfolio**
Weighting: 50%

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 Unit evaluation record

Feedback
Direct Student - Supervisor meeting (weekly) and interaction, gives very clear idea about topic and helps to develop knowledge in respective area.

Recommendation
Continue to keep weekly arranged meetings throughout the term. To make meetings more productive we should work with the student on the students work and his/her effort on previous feedback provided.

Feedback from Unit Evaluation record

Feedback
The lectures, tutorials and resource provided in Moodle helps students a lot.

Recommendation
This practice will be continued in the next offering with more enhancements to the quality of the resources.

Feedback from Unit Evaluation record

Feedback
Students feel excited to choose a research topic of their own interest.

Recommendation
This practice will be continued.

Feedback from Unit Evaluation record; Unit Coordinator

Feedback
Improve facilities for experimental research.

Recommendation
Request to invest more capital on purchasing new lab equipment. The lab shed recently rented is too small for mechanical engineering equipment, recommend hiring more lab spaces and purchasing necessary lab equipment.

Feedback from Unit Evaluation record

Feedback
Feedback from supervisors in not provided in a timely manner.

Recommendation
Lecturers should pay extra attention to complete marking of assignments in due time.

Unit Learning Outcomes

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

1. Identify a suitable problem related to the study discipline
2. Develop a research question including identifying key words
3. Conduct an indepth review of related literature
4. Select an appropriate research methodology to investigate the problem
5. Regularly communicate professionally with all stakeholders in formal and informal reports
6. Professionally present the project plan in a seminar and defend the methodology adopted.

n/a

Alignment of Learning Outcomes, Assessment and Graduate Attributes

— N/A Level | ∘ Introductory Level | • Intermediate Level | • Graduate Level | ∘ Professional Level | ∘ Advanced Level

Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes					
	1	2	3	4	5	6
1 - Report - 10%	•	•				
2 - Literature Review or Systematic Review - 20%			•			
3 - Presentation - 20%				•		•
4 - Portfolio - 50%	•	•	•	•	•	

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 - 10%	∘	∘	∘	∘				
2 - Literature Review or Systematic Review - 20%	∘	∘		∘				
3 - Presentation - 20%	∘	∘	∘	∘		∘		
4 - Portfolio - 50%	∘	∘	∘	∘		∘		

Textbooks and Resources

Textbooks

There are no required textbooks.

Additional Textbook Information
Strand
FE7
ANSYS
SIMSCAPE/FLUIDS
DESIGN MOD
TRNSYS
VPIphotonics
Design Suite version 10.0
Anaconda Python
Matlab
ANSYS (Fluent; DesignModeller)
GT-Power
ABAQUS
DesignBuilder
EDEM Classroom software

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

Raj Sharma Unit Coordinator
r.sharma@cqu.edu.au

Schedule

Week 1 - 09 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
Start research on your topic. Organise a weekly meeting with your project advisor. Record the agreed location and the time on the unit website.		Meet with your advisor on a weekly basis. Share your progress in the meeting and seek guidance and advice. Take the record of the meeting using four-square chart available on the Moodle and forward to your advisor every week after the meeting. Meeting minute should be part of your portfolio which will be used to assess your progress.

Week 2 - 16 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
Refine your topic based on a literature review. Commence writing the introduction section. Work on literature review.		Meet with your advisor on a weekly basis. Share your progress in the meeting and seek guidance and advice. Take the record of the meeting and update on the unit website every week. Meeting minutes approved by the project advisor will be be used to evaluate project progress. Proof of satisfactory project progress is essential for due date extension and other decisions when necessary.

Week 3 - 23 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
Keep working on your project and develop your Introduction and literature review sections.		Meet with your advisor on a weekly basis. Share your progress in the meeting and seek guidance and advice. Take the record of the meeting and update on the unit website every week. Meeting minutes approved by the project advisor will be be used to evaluate project progress. Proof of satisfactory project progress is essential for due date extension and other decisions when necessary.

Week 4 - 30 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
Keep working on your project and develop your Introduction and literature review sections.		Meet with your advisor on a weekly basis. Share your progress in the meeting and seek guidance and advice. Take the record of the meeting and update on the unit website every week. Meeting minutes approved by the project advisor will be be used to evaluate project progress. Proof of satisfactory project progress is essential for due date extension and other decisions when necessary.

Week 5 - 06 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic

Keep working on your project and develop your Introduction and literature review sections.		Meet with your advisor on a weekly basis. Share your progress in the meeting and seek guidance and advice. Take the record of the meeting and update on the unit website every week. Meeting minutes approved by the project advisor will be be used to evaluate project progress. Proof of satisfactory project progress is essential for due date extension and other decisions when necessary. **General Literature Review 10%** Due: Week 5 Friday (10 Apr 2020) 11:45 pm AEST

Vacation Week - 13 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
Keep working on your project and develop your Introduction and literature review sections.		Meet with your advisor on a weekly basis. Share your progress in the meeting and seek guidance and advice. Take the record of the meeting and update on the unit website every week. Meeting minutes approved by the project advisor will be be used to evaluate project progress. Proof of satisfactory project progress is essential for due date extension and other decisions when necessary.

Week 6 - 20 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
Keep working on your project and develop your Introduction and literature review sections.		Meet with your advisor on a weekly basis. Share your progress in the meeting and seek guidance and advice. Take the record of the meeting and update on the unit website every week. Meeting minutes approved by the project advisor will be be used to evaluate project progress. Proof of satisfactory project progress is essential for due date extension and other decisions when necessary.

Week 7 - 27 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic

Complete and submit project introduction and literature review. Start working on project methodology.		Meet with your advisor on a weekly basis. Share your progress in the meeting and seek guidance and advice. Take the record of the meeting and update on the unit website every week. Meeting minutes approved by the project advisor will be be used to evaluate project progress. Proof of satisfactory project progress is essential for due date extension and other decisions when necessary. **Project Introduction and Literature Review - 20%** Due: Week 7 Monday (27 Apr 2020) 11:45 pm AEST

Week 8 - 04 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
Keep working on your project and develop your Introduction, literature review and methodology sections.		Meet with your advisor on a weekly basis. Share your progress in the meeting and seek guidance and advice. Take the record of the meeting and update on the unit website every week. Meeting minutes approved by the project advisor will be be used to evaluate project progress. Proof of satisfactory project progress is essential for due date extension and other decisions when necessary.

Week 9 - 05 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
Keep working on your project and develop your Introduction, literature review and methodology sections. Prepare your presentation and take advice fro your project advisor.		Meet with your advisor on a weekly basis. Share your progress in the meeting and seek guidance and advice. Take the record of the meeting and update on the unit website every week. Meeting minutes approved by the project advisor will be be used to evaluate project progress. Proof of satisfactory project progress is essential for due date extension and other decisions when necessary.

Week 10 - 06 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
Prepare planning report.		Meet with your advisor on a weekly basis. Share your progress in the meeting and seek guidance and advice. Take the record of the meeting and update on the unit website every week. Meeting minutes approved by the project advisor will be be used to evaluate project progress. Proof of satisfactory project progress is essential for due date extension and other decisions when necessary.

Week 11 - 07 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
Keep working on planning report.		Meet with your advisor on a weekly basis. Share your progress in the meeting and seek guidance and advice. Take the record of the meeting and update on the unit website every week. Meeting minutes approved by the project advisor will be be used to evaluate project progress. Proof of satisfactory project progress is essential for due date extension and other decisions when necessary.

Week 12 - 08 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
Submit the planning report.		

Assessment Tasks

1 General Literature Review 10%

Assessment Type
Report

Task Description
You will be required to evaluate and critically review given literature under a given theme.

Assessment Due Date
Week 5 Friday (10 Apr 2020) 11:45 pm AEST

Return Date to Students

Weighting
10%

Minimum mark or grade
50

Assessment Criteria
The literature review report will be evaluated based on your ability to accurately summarise and analyse the major themes of the given literature, clarity of the report, assessment of the reliability of the literature and accurate use of the recommended referencing style.
Detailed assessment criteria will be available on the course website.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
.pdf file

Learning Outcomes Assessed

- Identify a suitable problem related to the study discipline
- Develop a research question including identifying key words

Graduate Attributes

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

2 Project Introduction and Literature Review - 20%

Assessment Type
Literature Review or Systematic Review

Task Description
Project introduction should provide a background to the project, including a brief literature review to contextualise the project. It should include realistic aims and objectives and identify expected outcomes.
You should critically evaluate and present the literature review on your topic. It is important that the literature you use are directly relevant to your project topic and support your project rationale.

Assessment Due Date
Week 7 Monday (27 Apr 2020) 11:45 pm AEST

Return Date to Students

Weighting
20%

Minimum mark or grade
50%

Assessment Criteria
The extent to which

- the project background is clearly written.
- the context justifies the need of the work.
- the aims and objectives are clear and realistic.
- the proposal is supported by relevant literature
- appropriate quality and number of literature are reviewed.
- literature are critically evaluated

Detailed Assessment Criteria will be available on the course website.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
.pdf

Learning Outcomes Assessed

- Conduct an indepth review of related literature

Graduate Attributes

- Knowledge
- Communication
- Research

3 Presentation - 20%

Assessment Type
Presentation

Task Description
Students are required to do a 10-minute presentation on their project plan. Prepare power point slides to present for 10 min and 5 min for Q&A session. Presentations cannot be rescheduled.

Assessment Due Date
Week 10 Monday (18 May 2020) 11:45 pm AEST

Exact presentation schedule will be published on the course website.

Return Date to Students

Weighting
20%

Minimum mark or grade
50

Assessment Criteria
Aim and objective, depth of literature review, appropriateness of proposed methodology, presentation style and skills and answering questions are the major assessable items. Detailed Assessment Criteria will be available on the course website.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
You are required to present at your scheduled time.

Learning Outcomes Assessed

- Select an appropriate research methodology to investigate the problem
- Professionally present the project plan in a seminar and defend the methodology adopted.

Graduate Attributes

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

4 Planning Thesis - 50% (Minimum Marks required 50%)

Assessment Type
Portfolio

Task Description
Submit the planning report that you are going to implement in ENRP20003 Engineering Research Project Implementation unit. You are expected to structure your report as follows:

- Title Page
- Abstract
- Acknowledgments
- Table of Contents
- List of Figures
- List of Tables
- Introduction
- Literature Review
- Methodology
- Risk Assessment
- Conclusion
- References
- Appendices as appropriate

Assessment Due Date
Week 12 Friday (5 June 2020) 11:45 pm AEST

Return Date to Students

After the certification of grades.

Weighting
50%

Minimum mark or grade
50%

Assessment Criteria
The project report will be evaluated based on the quality of individual chapters and comprehensive of the whole project and the thesis report.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
.pdf

Learning Outcomes Assessed

- Identify a suitable problem related to the study discipline
- Develop a research question including identifying key words
- Conduct an indepth review of related literature
- Select an appropriate research methodology to investigate the problem
- Regularly communicate professionally with all stakeholders in formal and informal reports

Graduate Attributes

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

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