ENRP20003 *Engineering Research Project Implementation*
Term 1 - 2019

Profile information current as at 05/05/2024 01:37 am

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, a professional presentation and a technical paper.

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 - 2019

- 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. **Thesis/Dissertation**
Weighting: 50%
4. **Essay**
Weighting: 10%

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 Students

Feedback
Students did not receive feedback in time.

Recommendation
Supervisors would be prompted regularly to provide feedback to students.

Feedback from Staff

Feedback
More resources should be supplied to the students.

Recommendation
Adopt a textbook as a resource and improve delivery materials.

Feedback from Student

Feedback
Some software and computers required for the projects are not available.

Recommendation
In the Simulation Lab, there are only 4 computers which are not enough for big classes. Another six computers will be added in 2019, more software will be available in 2019.

Feedback from Staff

Feedback
Three discipline students enrolled together in one class made it difficult to moderate and finalise results.

Recommendation
Students will be grouped according to their discipline and a Unit Coordinator for each discipline will be allocated.

Feedback from Students

Feedback
Some students find it difficult to learn the software required to complete the projects.

Recommendation
Additional resources on software will be provide on the Moodle site.

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 practicing professionals
6. Critically reflect on self-performance and develop a plan for lifelong and professional learning.

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 - 20%	•			•		
2 - Presentation - 20%		•	•	•	•	
3 - Thesis/Dissertation - 50%	•	•	•		•	
4 - Essay - 10%						•

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 - Thesis/Dissertation - 50%	◦	◦	◦	◦		◦	◦	

Assessment Tasks	Graduate Attributes							
	1	2	3	4	5	6	7	8
4 - Essay - 10%		○			○	○		

Textbooks and Resources

Textbooks

ENRP20003

Prescribed

Guide to Research Projects for Engineering Students
Authors: Eng-Choon Leong; Carmel Lee-Hsia Heah; Kenneth Keng Wee Ong
CRC Press
Binding: Paperback

Additional Textbook Information
Copies can be purchased from the CQUni Bookshop here: http://bookshop.cqu.edu.au (search on the Unit code)

View textbooks at the CQUniversity Bookshop

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 styles below:

- Harvard (author-date)
- Vancouver

For further information, see the Assessment Tasks.

Teaching Contacts

Abdul Mazid Unit Coordinator
a.mazid@cqu.edu.au

Schedule

Week 1. Introduction and Literature Review - Advanced - 11 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
• Narrating and formatting Introduction chapter • Narrating and formatting Literature Review chapter	• Chapter 13 • Refer to lecture notes	

Week 2. Thesis / Dissertation - 18 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic

• Components of a thesis and formatting	• Refer to lecture notes	

Week 3. Theory and Model development - 25 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
• Theoretical development required for research methods • Model development for a research project	• Refer to lecture notes	

Week 4. Model development (contd.) - 01 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
• Model development for a research project (Contd.) • Experiment/Simulation Design	• Chapter 14 • Refer to lecture notes	

Week 5. Methodology and Procedure - Advanced - 08 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
• Methodology Design and Procedure Development	• Chapter 14 • Refer to lecture notes	

Vacation Week - 15 Apr 2019

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

Week 6. Methodology (Contd.) - 22 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
• Writing Methodology • Referencing style Revisit and Practice	• Chapter 13 • Refer to lecture notes	**Interim Thesis/Dissertation** Due: Week 6 Friday (26 Apr 2019) 11:45 pm AEST

Week 7. Presentation Document - 29 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
• Thesis Presentation content development and preparation • Presentation skills	• Chapters 22 and 23 • Refer to lecture notes	Invited Guest Lecture (Subjected to confirmation)

Week 8. Results and Discussion - 06 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
• Preparing results and discussion chapter	• Chapter 15 • Refer to lecture notes	

Week 9. Conclusion and Abstract Writing - 13 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
• Components of Conclusion and writing • Components of Abstract and writing	Follow lecture notes	

Week 10. Technical Paper - 20 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
• Reflective Paper and preparation • EA Stage 1 Competency		

Week 11. Thesis - Revisit - 27 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
• Thesis - Collating chapters together		

Week 12. Thesis Submission - 03 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic

		Thesis Presentation Sessions (Mechanical, Civil and Electrical) **Presentation** Due: Week 12 Monday (3 June 2019) 11:45 pm AEST **Implementation** **Thesis/Dissertation** Due: Week 12 Friday (7 June 2019) 11:45 pm AEST **Reflective Paper** Due: Week 12 Friday (7 June 2019) 11:45 pm AEST
• Components of Thesis for Submission - Revisit		

Review/Exam Week - 10 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
• No examination in ENRP20003		

Exam Week - 17 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic

Term Specific Information

Assessment Tasks

1 Interim Thesis/Dissertation

Assessment Type
Report

Task Description
This submission is your preliminary thesis. Follow the content of a typical thesis and examples provided in classes. Typically this document should include:

- Title page;
- Abstract;
- Keywords;
- Introduction and Background;
- Objective/s of Research;
- Literature Review Theoretical Background or Theory Development
- Methodology and Procedures
- Results and Discussion
- Conclusion and Future Works;
- List of References;
- Appendix (if applicable).

Students must attend all the lectures and attend weekly meetings with their supervisors.

Assessment Due Date
Week 6 Friday (26 Apr 2019) 11:45 pm AEST

Return Date to Students
Week 8 Friday (10 May 2019)

Weighting
20%

Minimum mark or grade
25%

Assessment Criteria
Assessment of the Interim Thesis will be done based on the followings:

- Quality of title page, Abstract, Problem Statement, Objective and Keywords.

- Comprehensive Introduction and Literature Review.
- Methodology and Problem-Solving strategy based on the literature
- Comprehensive results and Discussions
- Quality of references and referencing skills
- Quality of English (Spelling, grammar and sentence construction)

More detailed assessment criteria will be available in Week 1.

Referencing Style

- Harvard (author-date)
- Vancouver

Submission
Online

Submission Instructions
Submit MS Word file (Name the document as: InterimReport_ENRP20003_your last name)

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

Graduate Attributes

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

2 Presentation

Assessment Type
Presentation

Task Description
Presentation time is 12 mins and 3 mins for Questions and Answer. The presentation will be held in Week 12 and the schedule will be available in week 8. Presentation slides should contain detailed information on:

- Background;
- Research gap and Objective;
- Literature Review;
- Results and Discussions;
- Conclusions and Recommendations

Note: Lectures on presentation document preparation and presentation style are provided. You must attend all lecture classes and attend all meetings with your supervisor.

Assessment Due Date
Week 12 Monday (3 June 2019) 11:45 pm AEST

Return Date to Students
Week 12 Friday (7 June 2019)
Feedback on the presentations will be provided immediately after the presentation.

Weighting
20%

Minimum mark or grade
50%

Assessment Criteria
This assessment will be evaluated based on the following criteria

- Clear objectives
- Critical understanding of Theory, Model and Methodology used
- Data Analysis
- Integration of the findings with the theories and methods

- Presentation style and skills

More detailed assessment criteria will be available in Unit Moodle site in Week 1.

Referencing Style

- Harvard (author-date)
- Vancouver

Submission
Online

Submission Instructions
Submit PowerPoint file (Name the document as: PresentationPPT_ENRP20003_Your last name)

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 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

3 Implementation Thesis/Dissertation

Assessment Type
Thesis/Dissertation

Task Description
This is your final version of the thesis and contents are expected to be an upgraded version of the Interim Thesis. It is expected that all the feedbacks given by the examiners during the presentation is incorporated in the final thesis. This is an opportunity to demonstrate your success and knowledge base of research within your chosen research area carried out over two terms.

Assessment Due Date
Week 12 Friday (7 June 2019) 11:45 pm AEST

Return Date to Students
Exam Week Friday (21 June 2019)

Weighting
50%

Minimum mark or grade
50%

Assessment Criteria
Assessment of the Implementation Thesis will be done based on the followings:

- Quality of title page, Abstract, Problem Statement, Objective and Keywords.
- Comprehensive Introduction and Literature Review.
- Methodology and Problem-Solving strategy based on the literature
- Comprehensive results and Discussions
- Clear Conclusions
- Quality of references and referencing skills
- Quality of English (Spelling, grammar and sentence construction)
- Comprehensiveness of the whole thesis

More detailed assessment criteria will be available in Week 1.

Referencing Style

- Harvard (author-date)
- Vancouver

Submission
Online

Submission Instructions
Submit MS Word document (Name the document as: ImplementationThesis_ENRP20001_your last name)

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 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

4 Reflective Paper

Assessment Type
Essay

Task Description
This should be a short report reflecting your achievement of Engineers Australia Stage 1 Competencies. For each competency state whether you have attained that competency and reflect on how you have achieved (through unit activities, research project, internship, seminar etc.) that competency during your course. For any competencies, you have not attained, prepare a plan for achieving them. You are also required to include a short to medium term (2-5 years) plan for your professional development in your chosen profession.

Assessment Due Date
Week 12 Friday (7 June 2019) 11:45 pm AEST

Return Date to Students
Exam Week Friday (21 June 2019)

Weighting
10%

Minimum mark or grade
50%

Assessment Criteria
The assessment will be evaluated based on the quality of the reflection that shows how you achieved Engineers Australia Stage 1 Competencies. Detailed assessment criteria will be available on the Unit Moodle site in Week 1.

Referencing Style

- Harvard (author-date)
- Vancouver

Submission
Online

Learning Outcomes Assessed

- Critically reflect on self-performance and develop a plan for lifelong and professional learning.

Graduate Attributes

- Communication
- Self-management
- 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