ENEG20001 *Australian Engineering Practice*
Term 2 - 2017

Profile information current as at 03/05/2024 08:35 am

All details in this unit profile for ENEG20001 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
In this unit, you will be introduced to the roles of professional engineers in the Australian context. You will explore the Engineers Australia Stage 1 competencies and the place of the professional engineer in the engineering team. You will see that the engineer's role is to facilitate the integration of technical, business, social, cultural, environmental, economic and political issues that arise within engineering projects and programs. You will apply information literacy skills and information technology skills to engineering projects and present project outcomes. You will work in teams and develop team skills, develop communication skills appropriate for the professional environment, apply risk assessment and workplace health and safety assessment to engineering activities and explore the complex nature of engineering activities and the need to deal with uncertainty and conflicting information. You will prepare a portfolio to demonstrate development of a professional attitude, problem-solving skills, technical knowledge and productive work practices, and provide evidence of a professional capacity to communicate, work and learn productively, both individually and in teams.

Details
Career Level: *Postgraduate*
Unit Level: *Level 8*
Credit Points: *12*
Student Contribution Band: *2*
Fraction of Full-Time Student Load: *0.25*

Pre-requisites or Co-requisites
There are no requisites for this unit.
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 - 2017

- Distance
- Melbourne
- 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. **Portfolio**
Weighting: 100%

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 Moodle website.

Feedback

Students interested in the team project, workshop sessions and practice presentation as part of the unit contents

Recommendation

We keep improving the unit content and bring in more guest lecturers.

Feedback from Moodle website.

Feedback

With this unit, students could improve their knowledge about Australian professional career and Engineers Australia. Team working with other students on engaging projects, project management skills was appreciated by students.

Recommendation

We make sure that detailed projects are defined for each semester.

Feedback from Moodle Website.

Feedback

Library must have copies of textbook for the student.
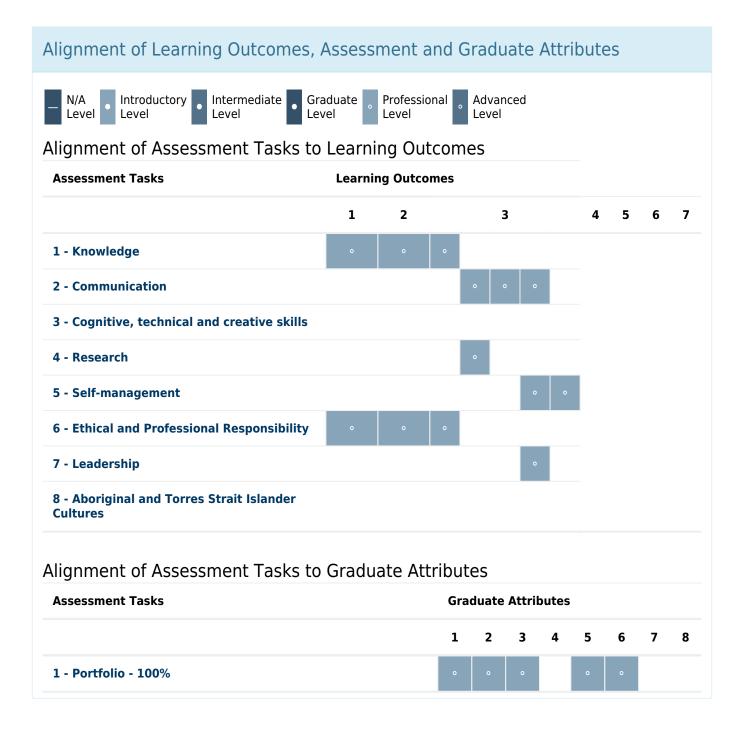
Recommendation

We make sure that the Library keeps more copies of the prescribed textbook.

Unit Learning Outcomes

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

1. Explain the historical impact of engineering on society
2. Explain engineering professionalism and ethics in the Australian context
3. Discuss engineers' roles, responsibilities and the need to employ principles of sustainable development
4. Manage information and documentation
5. Communicate effectively across a range of contexts
6. Lead or participate collaboratively in teams
7. Demonstrate critical self-review, self-management and lifelong learning

The learning outcomes are linked to Engineers Australia Stage 1 Competencies.

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	7
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 - Portfolio - 100%	○	○	○		○	○		

Textbooks and Resources

Textbooks
ENEG20001

Prescribed

The Making of an Expert Engineer
(2014)
Authors: Trevelyan, J
CRC Press, Taylor & Francis
London , UK
ISBN: 9781138026926
Binding: Hardcover

Additional Textbook Information
An ebook version is also available. The link is available at the CRC Press.

View textbooks at the CQUniversity Bookshop

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

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- Basic project management software such as MS Project
- Basic word processing software and spreadsheeting software such as MS Office
- Various software resources dependant on the project selected.

Referencing Style

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

Teaching Contacts

Fae Martin Unit Coordinator
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Schedule

Week 1 - 10 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Why engineer?	Trevelyan Chapters 1 Why engineer? 2 What type of engineer? and 3 Flying start, no wings, wrong direction	Ice-breaker activity

Week 2 - 17 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic

| Becoming an expert; What engineers need to know | Trevelyan Chapters
4 Becoming an expert and
5 What engineers know | Project will be done in a team of 4/5. Teams will be formed and project topics allocated.
Think about how to write reflection on Learning Outcomes 1 and 2.
Learning Outcome 1: Explain the historical impact of engineering on society
Learning Outcome 2: Explain engineering professionalism and ethics in the Australian context. |

Week 3 - 24 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Listening, seeing, reading; Collaboration	Trevelyan Chapters 6 Three neglected skills: Listening, seeing and reading and 7 Collaboration in engineering	Teams work on Project Proposal. Start to understand the problem by doing research and talking to stakeholders. **Individual reflective writing 1:** You will need to submit a reflective paper on Learning Outcomes 1 and 2. The page limit for the reflective paper is **maximum 2 pages**. **Due: Friday of this week, 4:00 pm**.

Week 4 - 31 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Teaching and technical coordination	Trevelyan Chapters 8 Informal teaching: More than an interpreter and 9 Technical coordination: Informal leadership	**Teams project presentation 1**: Teams present their **Project Proposal** including objectives and scope, Team Charter, Gantt chart, etc. Your facilitator will provide the presentation schedule.

Week 5 - 07 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic
Managing a project	Trevelyan Chapter 10 Managing a project	Teams continue to investigate state of the art and complete literature review. It's time to think about writing a reflective paper on Learning Outcomes 3, 4 and 5. Learning Outcome 3: Discuss engineer's roles, responsibilities, and the need to employ principles of sustainable development. Learning Outcome 4: Manage information and documentation. Learning Outcome 5: Communicate effectively across a range of contexts.

Vacation Week - 14 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic

Week 6 - 21 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic
Understanding investment decisions	Trevelyan Chapter 11 Understanding investment decisions	Teams continue to work on project, generate potential solutions and begin to generate a framework for evaluating solutions. **Individual reflective writing 2:** You will need to submit a reflective paper on learning outcomes 3 to 5. The page limit for the reflective paper is **maximum 3 pages**. **Due: Friday of this week, 4:00 pm**.

Week 7 - 28 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic
Negotiating sustainability	Trevelyan Chapter 12 Negotiating sustainability	Teams continue to work on the project, and evaluate and model the project solution.

Week 8 - 04 Sep 2017

Module/Topic	Chapter	Events and Submissions/Topic
Great expectations	Trevelyan Chapter 13 Great expectations	Teams continue to work on the project, and evaluate and model the project solution. It's time to think about writing a reflective paper on Learning Outcomes 6 and 7. Learning Outcome 6: Lead or participate collaboratively in teams. Learning Outcome 7: Demonstrate critical self-review, self-management and life-long learning. **Draft project report submission:** Submit a draft of your project report. Your draft should include an outline and as much information as possible. More complete drafts will receive more meaningful feedback. **Due: Friday of this week, 4.00 pm**.

Week 9 - 11 Sep 2017

Module/Topic	Chapter	Events and Submissions/Topic
Seeking work	Trevelyan Chapter 14 Seeking work	Teams continue to work on the project, develop a model and refine their solution. **Individual reflective writing 3:** You will need to submit a reflective paper on Learning Outcomes 6 and 7. The page limit for writing reflective paper is **maximum 2 pages**. **Due: Friday of this week, 4.00 pm**.

Week 10 - 18 Sep 2017

Module/Topic	Chapter	Events and Submissions/Topic
Conclusion	Trevelyan Chapter 15 Conclusion	Teams finalise their project and work on their report and presentation. **Team project presentation 2**: Teams present their **project progress including an outline of their final report and expected outcomes.**

Week 11 - 25 Sep 2017

Module/Topic	Chapter	Events and Submissions/Topic
		FINAL Team project report: Due Friday of this week, 4:00 pm.

Week 12 - 02 Oct 2017

Module/Topic	Chapter	Events and Submissions/Topic
		Team project presentation 3: Teams present **project outcomes** Your facilitator will provide the schedule. **Portfolio** Due: Week 12 Friday (6 Oct 2017) 4:00 pm AEST

Review/Exam Week - 09 Oct 2017		
Module/Topic	**Chapter**	**Events and Submissions/Topic**

Exam Week - 16 Oct 2017		
Module/Topic	**Chapter**	**Events and Submissions/Topic**

Assessment Tasks

1 Portfolio

Assessment Type
Portfolio

Task Description
Your portfolio will demonstrate how you have met the learning outcomes for the unit and to what level. It should be presented in the form of a technical report including a table of contents. You must include **evidence** from your project work, team work, class activities and readings to demonstrate your achievement of the learning outcomes. There are minimum requirements for the Portfolio and you must provide evidence of the minimum requirements in order to be eligible for a passing grade for this unit.
At the beginning of the term, it is important that you familiarise yourself with the evidence you need to collect so that you can collect the required evidence as you work through the term.
During the term you will complete a **project** as part of a team. You will use your personal contributions to the team **project report** and **team presentation** as part of the evidence of your achievement of the learning outcomes.
Throughout the term, you will be writing some **reflective papers** that directly relate to the set readings and the learning outcomes. These will form part of the evidence of your achievement of the learning outcomes.
Individual Viva Voce
Following the submission of the Portfolio, you may be asked to undertake a viva voce to substantiate the claims made in your Portfolio against each learning outcome. The viva voce is **compulsory**. During the viva voce, you will be asked questions directly related to the Portfolio assessment criteria and the evidence you have provided. This may include evidence related to your team work. Your mark for particular Portfolio criteria may be affected by your viva voce responses.
Further information on the Portfolio submission is available on the Unit Website.

Assessment Due Date
Week 12 Friday (6 Oct 2017) 4:00 pm AEST
The Portfolio is due at the end of Week 12. Viva voces will be scheduled for Week 13.

Return Date to Students

Within 2 weeks

Weighting
100%

Minimum mark or grade
Students must demonstrate an acceptable achievement of each of the learning outcomes to be eligible for a passing grade in this course.

Assessment Criteria
You must provide evidence of your achievement of each of the Learning Outcomes.
There is an Assessment Criteria sheet for this unit available on the Unit Website. The Assessment Criteria sheet gives guidance regarding the type of evidence required for each level of achievement. It is important that you review the Criteria sheet at the beginning of the term so you are familiar with the evidence you need to collect throughout the term.
There are minimum requirements for the Portfolio and you must provide evidence of the minimum requirements in order to be eligible for a passing grade for this unit.

Referencing Style

- Harvard (author-date)

Submission
Online

Learning Outcomes Assessed

- Explain the historical impact of engineering on society
- Explain engineering professionalism and ethics in the Australian context
- Discuss engineers' roles, responsibilities and the need to employ principles of sustainable development
- Manage information and documentation
- Communicate effectively across a range of contexts
- Lead or participate collaboratively in teams
- Demonstrate critical self-review, self-management and lifelong learning

Graduate Attributes

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