



ENEG20001 Australian Engineering Practice

Term 3 - 2017

Profile information current as at 29/04/2024 12:30 pm

All details in this unit profile for ENEG20001 have been officially approved by CQUUniversity 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 3 - 2017

- Melbourne
- Perth

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 Student evaluations

Feedback

Students really appreciated the opportunity to learn new Standards and software.

Recommendation

Continue to ensure that the projects require students to access Australian Standards. Continue to provide guidance in the use of relevant software.

Feedback from Student evaluations

Feedback

Students appreciate the assistance provided by the Academic Learning Centre.

Recommendation

Continue to ensure that the ALC runs several workshops throughout the term so students are aware of the service and are comfortable in approaching the relevant staff.

Feedback from Teaching team

Feedback

Some students used an old version of the Assessment Criteria for their Portfolio.

Recommendation

Ensure students are reminded throughout the term that they must access all unit materials from the unit website so they can be sure they have the latest version.

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



Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes								
	1	2		3		4	5	6	7
1 - Knowledge	<div></div>	<div></div>	<div></div>						
2 - Communication				<div></div>	<div></div>	<div></div>			
3 - Cognitive, technical and creative skills									
4 - Research				<div></div>					
5 - Self-management						<div></div>	<div></div>		
6 - Ethical and Professional Responsibility	<div></div>	<div></div>	<div></div>						
7 - Leadership					<div></div>				
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](#).

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

Heena Panchasara Unit Coordinator
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Schedule

Week 1 - 06 Nov 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 - 13 Nov 2017

Module/Topic	Chapter	Events and Submissions/Topic
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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 - 20 Nov 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 - 27 Nov 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.

Vacation Week - 04 Dec 2017

Module/Topic	Chapter	Events and Submissions/Topic
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Week 5 - 11 Dec 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 and 4. Learning Outcome 3: Discuss engineer's roles, responsibilities, and the need to employ principles of sustainable development. Learning Outcome 4: Communicate effectively and technically across a range of contexts.

Week 6 - 18 Dec 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 and 4. The page limit for the reflective paper is maximum 3 pages . Due: Friday of this week, 4:00 pm.

Week 7 - 01 Jan 2018

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 - 08 Jan 2018

Module/Topic	Chapter	Events and Submissions/Topic
Great expectations	Trevelyan Chapter 13 Great expectations	<p>Teams continue to work on the project, and evaluate and model the project solution.</p> <p>It's time to think about writing a reflective paper on Learning Outcomes 5 and 6.</p> <p>Learning Outcome 5: Lead or participate collaboratively in teams.</p> <p>Learning Outcome 6: Demonstrate critical self-review, self-management and life-long learning.</p> <p>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.</p> <p>Due: Friday of this week, 4.00 pm.</p>

Week 9 - 15 Jan 2018

Module/Topic	Chapter	Events and Submissions/Topic
Seeking work	Trevelyan Chapter 14 Seeking work	<p>Teams continue to work on the project, develop a model and refine their solution.</p> <p>Individual reflective writing 3: You will need to submit a reflective paper on Learning Outcomes 5 and 6. The page limit for writing reflective paper is maximum 2 pages.</p> <p>Due: Friday of this week, 4.00 pm.</p>

Week 10 - 22 Jan 2018

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

Week 11 - 29 Jan 2018

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

Week 12 - 05 Feb 2018

Module/Topic	Chapter	Events and Submissions/Topic
		<p>Team project presentation 3: Teams present project outcomes</p> <p>Your facilitator will provide the schedule.</p> <p>Portfolio Due: Week 12 Friday (9 Feb 2018) 4:00 pm AEST</p>

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 (9 Feb 2018) 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