



# ENEG20001 Australian Engineering Practice

## Term 3 - 2018

Profile information current as at 08/05/2024 11:07 pm

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 3 - 2018

- 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 Unit evaluation

**Feedback**

The unit taught students real world engineering practice and has helped students to become better engineers.

**Recommendation**

Continue to maintain this level of satisfaction at least.

#### Feedback from Unit evaluation

**Feedback**

The lecture class was very noisy.

**Recommendation**

The face-to-face lecturer should be in the class.

#### Feedback from Unit evaluation

**Feedback**

Portfolio marking was not consistent among the teaching team.

**Recommendation**

Develop a common and consistent understanding of portfolio marking within the teaching team.

## 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	Introductory	Introductory	Introductory					
2 - Communication				Professional	Professional	Professional		
3 - Cognitive, technical and creative skills								
4 - Research				Graduate				
5 - Self-management						Professional	Professional	
6 - Ethical and Professional Responsibility	Introductory	Introductory	Introductory					
7 - Leadership					Professional			
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%	Professional	Professional	Professional		Professional	Professional		

## Textbooks and Resources

### Textbooks

ENEG20001

#### Prescribed

#### The Making of an Expert Engineer

(2014)

Authors: Trevelyan , J

CRC Press ( Taylor and Francis )

London , UK

ISBN: 9781138026926

Binding: Paperback

#### Additional Textbook Information

An ebook version of this text is also available. The link is available at the [CRC Press](#). However, if you prefer a paper text, they are available at 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 style: [Harvard \(author-date\)](#)

For further information, see the Assessment Tasks.

## Teaching Contacts

**Md Nurun Nabi** Unit Coordinator

[m.nabi@cqu.edu.au](mailto:m.nabi@cqu.edu.au)

## Schedule

### Week 1 - 05 Nov 2018

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

### Week 2 - 12 Nov 2018

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  
5 What engineers know

Students to brainstorm project ideas. The project will be done by a team of 6/7 students.

Think about how to write the reflection on your 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 - 19 Nov 2018

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 continue to work on Project proposal. Understand the problems, prepare project objective and plan, identify the research question and develop the methodology.

**Individual Reflective Writing Task1**  
**Due: This Week Friday 9:00 PM (AEST)**

### Week 4 - 26 Nov 2018

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 Proposal**  
**Due: This Week Friday 9:00 PM (AEST)**

### Vacation Week - 03 Dec 2018

Module/Topic

Chapter

Events and Submissions/Topic

### Week 5 - 10 Dec 2018

Module/Topic

Chapter

Events and Submissions/Topic

Managing a project

Trevelyan Chapter:  
10 Managing a project

Teams continue to investigate state of the art research and define the problem/research question, complete literature review, and develop a methodology.

It's time to think about writing a reflective paper on learning outcomes 3-5.  
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.

### Week 6 - 17 Dec 2018

Module/Topic

Chapter

Events and Submissions/Topic

Teams continue to work on their project.

Understand investment decision  
Trevelyan Chapter:  
11 Understanding investment decisions

**Individual Reflective Writing Task2**  
**Due: This Week Friday 9:00 PM (AEST)**

#### Week 7 - 31 Dec 2018

Module/Topic

Chapter

Events and Submissions/Topic

Negotiating sustainability

Trevelyan Chapter:  
12 Negotiating sustainability

Teams continue to work on the project and generate potential solutions and begin to generate a framework for evaluating solutions.

#### Week 8 - 07 Jan 2019

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.

**Teams Project Draft Report**  
**Due: This Week Friday 9:00 PM (AEST)**

#### Week 9 - 14 Jan 2019

Module/Topic

Chapter

Events and Submissions/Topic

Seeking work

Trevelyan Chapter:  
14 Seeking work

Teams continue to work on the project.

**Individual Reflective Writing Task3**  
**Due: This Week Friday 9:00 PM (AEST)**

#### Week 10 - 21 Jan 2019

Module/Topic

Chapter

Events and Submissions/Topic

Conclusion

Trevelyan Chapter:  
15 Conclusion

Teams finalise their project and work on their report and presentation.

**Teams Project Presentation**  
**The schedule will be provided.**

#### Week 11 - 28 Jan 2019

Module/Topic

Chapter

Events and Submissions/Topic

Review class

**Teams FINAL Project Report**  
**Due: This Week Friday 9:00 PM (AEST)**

#### Week 12 - 04 Feb 2019

Module/Topic

Chapter

Events and Submissions/Topic

**Exam Week - 11 Feb 2019**

Module/Topic

Chapter

Events and Submissions/Topic

## Assessment Tasks

### 1 Individual 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, teamwork, 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.

Compulsory pieces of work to be included in the portfolio are listed below. Failing to include the compulsory pieces of work in the portfolio will result in a Fail.

Few of the compulsory mandatory item to be included in your portfolio shall be:

- 1) Your Professional CV
- 2) The CPD record sheet with a minimum of 1 professional practice exposure activities that you (Student) complete during the term
- 3) A CPD plan for how you will meet the 480 hours total by the end of your program study (Masters of Engineering)

At the beginning of the term, it is important that you familiarize 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 teamwork. 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 (8 Feb 2019) 9:00 pm AEST

#### Return Date to Students

Within two weeks after the due date

#### Weighting

100%

#### Minimum mark or grade

50%

#### 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 essential 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 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