ENEG20001 *Australian Engineering Practice*
Term 1 - 2020

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

This unit introduces the context of Australian engineering practise, including the competency standards and codes of practice. You will study Australian engineering projects by summarising and reviewing the literature with emphasis on the technical methods and standards adopted, ethical practice and professional responsibility. This unit will develop your communication skills, including technical writing and presentations based on effective research, paraphrasing, referencing and reviewing published information. As a small team, you will also prepare a scope for an investigation to demonstrate an understanding of the tasks involved in an Australian engineering feasibility investigation.

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 1 - 2020

- 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. **Written Assessment**
Weighting: 30%
2. **Written Assessment**
Weighting: 30%
3. **Written Assessment**
Weighting: 40%

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 relevance to authentic engineering aspects was good and overall unit structure was great.

Recommendation

Will continue to maintain this level of satisfaction.

Feedback from Unit evaluation

Feedback

The support was good and enjoyed studying it. The lecturer was well-organised.

Recommendation

The teaching team should be well communicated and instructed on all aspects of delivery, assessment, engagement, feedback, etc.

Feedback from Unit evaluation

Feedback

All things are great in this unit. Still, some people hesitate to speak in front of all.

Recommendation

More motivation and openness will be created to make students feel free to ask a question without any hesitation.

Feedback from Unit evaluation

Feedback

Zoom lecture was found to be ineffective. Instead of Zoom classes, we need a real class.

Recommendation

Will be discussed with the management for better options for students.

Feedback from Unit evaluation

Feedback

Project supervision and guidance style should be improved and consistent across teaching team.

Recommendation

More thorough instruction and check list will be prepared to provide consistent guidance.

Unit Learning Outcomes

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

1. Summarise technical publications using paraphrasing and references
2. Deconstruct a project into Engineers Australia's graduate competencies
3. Review Australian practice in a specialised field of engineering
4. Generate a scope for a feasibility study of an engineering project
5. Work collaboratively based on critical self-review of graduate competencies
6. Communicate effectively through technical writing and presentations.

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
1 - Written Assessment - 30%	●	●				
2 - Written Assessment - 30%	●		●			●
3 - Written Assessment - 40%		●		●	●	●

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 - Written Assessment - 30%	○	○	○			○		
2 - Written Assessment - 30%	○	○	○	○		○	○	
3 - Written Assessment - 40%	○	○	○	○	○	○	○	

Textbooks and Resources

Textbooks

ENEG20001

Prescribed

The Making of an Expert Engineer
(2014)
Authors: James Trevalyan
CRC Press (Taylor and Francis)
London , UK
Binding: Paperback

Additional Textbook Information
There is a Kindle edition of this book available on Amazon and this version is completely acceptable for this unit. If you already have a suitable device to read it on, it is slightly more affordable and saves some trees!!

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)

Referencing Style

No referencing style set.

Teaching Contacts

Heena Panchasara Unit Coordinator
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Unit Coordinator
Edward Palmer Unit Coordinator
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Schedule

Week 1 - 09 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
What is engineering and what does an engineer do? Engineering case studies		View videos or texts related to famous engineering projects and discuss.

Week 2 - 16 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
Technical Writing and how it differs from other forms of writing, the elements of an engineering report, referencing		Short writing exercises in tutorials

Week 3 - 23 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic

Professional societies, codes of ethics,
Engineers Australia units of
competency

Writing exercises in tutorials related to
EA elements of competency and ethics

Week 4 - 30 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
		Referencing exercises, Assignment 1 due Friday of week 4
Academic dishonesty, avoiding plagiarism, Harvard referencing style		**Individual annotative bibliography and competency deconstruction** Due: Week 4 Friday (3 Apr 2020) 11:45 pm AEST

Week 5 - 06 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
Engineering in Australia, Case studies - Australian engineering projects, work performed by various engineering disciplines		writing exercises based on selected discipline based case studies in teh Australian context

Vacation Week - 13 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic

Week 6 - 20 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
Engineering software - Students to be introduced to commonly used engineering packages		Written report on software used in discipline with presentation to class

Week 7 - 27 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
Scoping a project		Exercises on scoping a project

Week 8 - 04 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
		Exercises on risk assessment, and the responsibilities of an engineer, review of code of ethics.
Risk Assessment and Health and Safety legislation		Assignment 2 due on Friday of week 8
		Individual literature review and discipline summary Due: Week 8 Friday (8 May 2020) 11:45 pm AEST

Week 9 - 11 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
Engineering teams - formation and management		exercises in team formation, team charter, keeping minutes of meetings

Week 10 - 18 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
Reflective practice		How to reflect on job/project performance?

Week 11 - 25 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
Project management		Exercises on planning and executing a project,

Week 12 - 01 Jun 2020

Module/Topic	Chapter	Events and Submissions/Topic
		Assignment 3 due Friday of week 12
Review of term		**Team feasibility study and competency evaluation** Due: Week 12 Friday (5 June 2020) 11:45 pm AEST

Review/Exam Week - 08 Jun 2020

Module/Topic	Chapter	Events and Submissions/Topic

Exam Week - 15 Jun 2020

Module/Topic	Chapter	Events and Submissions/Topic

Term Specific Information

You need to regularly access moodle as well as attend all lectures and tutorials.

Assessment Tasks

1 Individual annotative bibliography and competency deconstruction

Assessment Type
Written Assessment

Task Description
This task consists of two parts. In Part A, you will choose one technical paper from a list of resources provided and summarise that paper by creating an annotated bibliography. To achieve this, you will need to demonstrated skills in reading, understanding and explaining the details of a technical paper; paraphrasing information to avoid plagiarism; and referencing to correctly acknowledge your sources of information.
In Part B, you will complete a table based on the 16 elements of the Engineers Australia's Stage 1 Competencies. For each element, you will describe how this competency is demonstrated specifically through the engineering practice described in the technical paper you have chosen. If any elements are not directly addressed, you will articulate assumptions for how they could or should be demonstrated.

Assessment Due Date
Week 4 Friday (3 Apr 2020) 11:45 pm AEST

Return Date to Students
Week 6 Friday (24 Apr 2020)

Weighting
30%

Minimum mark or grade
25% minimum mark

Assessment Criteria
Assessment criteria will be provided in Moodle.

Submission
Online

Submission Instructions
Submit via upload link in moodle

Learning Outcomes Assessed

- Summarise technical publications using paraphrasing and references
- Deconstruct a project into Engineers Australia's graduate competencies

Graduate Attributes

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

2 Individual literature review and discipline summary

Assessment Type
Written Assessment

Task Description
This task also consists of two parts. In Part A, you will expand your annotated bibliography produced in Assignment 1 by completing a small literature review which incorporates published results from at least three other technical papers based on Australian projects in this area of practice. To achieve this, you will need to demonstrate referencing skills and the ability to synthesise information into a convincing and factual review. Your review should articulate points of agreement and disagreement and any gaps in the knowledge which have potential for future projects.
In Part B, you will prepare a description of Australian engineering practice after watching lectures that introduce various disciplines of engineering. You will need to understand the main organisations and technical societies operating in this discipline, what software is frequently used and what are some of the major projects being undertaken.

Assessment Due Date
Week 8 Friday (8 May 2020) 11:45 pm AEST

Return Date to Students
Week 12 Friday (5 June 2020)

Weighting
30%

Assessment Criteria
Assessment criteria will be provided in Moodle

Submission
Online

Submission Instructions
Submit via upload link in Moodle

Learning Outcomes Assessed

- Summarise technical publications using paraphrasing and references
- Review Australian practice in a specialised field of engineering
- Communicate effectively through technical writing and presentations.

Graduate Attributes

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

3 Team feasibility study and competency evaluation

Assessment Type
Written Assessment

Task Description
A also has two parts. In Part A, you will form a team with other students who completed A1 & A2 on similar topics. Your team will then combine your individual reviews to generate a comprehensive list of potential future projects. Your team will then choose one of these projects and develop a scope of investigation for a hypothetical feasibility study. To achieve this, your team will need to create a persuasive narrative based on background research that justifies why the project should proceed. You will also need to create a single aim statement which is dissolved into a series of objectives that describe the main aspects of the study and how they might be undertaken. Also, your team will need to list inclusions, exclusions, assumptions and limitations to further define the scope of the hypothetical investigation.
In Part B, your team will return to the stage 1 competencies and create a table that describes how each of the 16 elements are demonstrated through completing the feasibility study. Additionally, you will complete a self-review and allocate components of the study to team members based on their competencies.

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

Return Date to Students
Exam Week Friday (19 June 2020)

Weighting
40%

Assessment Criteria
Assessment criteria will be provided via Moodle

Submission
Online Group

Submission Instructions
Submit via upload link in Moodle

Learning Outcomes Assessed

- Deconstruct a project into Engineers Australia's graduate competencies
- Generate a scope for a feasibility study of an engineering project
- Work collaboratively based on critical self-review of graduate competencies
- Communicate effectively through technical writing and presentations.

Graduate Attributes

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

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