In Progress

Please note that this Unit Profile is still in progress. The content below is subject to change.

ENEG20003 *Sustainability Studio*

Term 1 - 2023

Profile information current as at 12/10/2024 03:05 pm

All details in this unit profile for ENEG20003 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 engage with a complex, real-world problem that crosses disciplinary boundaries. You will use a systems engineering approach to explore stakeholder needs and to write a set of requirements. In approaching the design task, you will need to balance technical, economic, social, and environmental issues and constraints. At the heart of such problem solving are teamwork, communication, knowledge management, and evaluation using sustainability principles.

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

At least 24 cp of the Master of Engineering.
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 - 2023

No offerings for ENEG20003

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

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 "Have your say" in Moodle

Feedback
Additional real-world sustainability examples could be helpful.

Recommendation
Include more authentic examples of sustainable engineering design.

Feedback from "Have your say" in Moodle

Feedback
Some of the best aspects of this unit are timely reminders for assignments, appreciation of work done by the students, taking care of each student.

Recommendation
The same practice will be continued in the next offering.

Unit Learning Outcomes

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

1. Show evidence of grappling with complex issues through stakeholder engagement
2. Develop a set of stakeholder requirements
3. Apply a systematic design process (systems engineering) to develop solutions to an issue
4. Demonstrate self-awareness of thinking processes and values, including socio-ecological thinking and uncertainty
5. Develop and pitch a change proposal
6. Reflect on the contribution of this project to professional development.

The Learning Outcomes for this unit are linked with the Engineers Australia Stage 1 Competency Standards for Professional Engineers in the areas of 1. Knowledge and Skill Base, 2. Engineering Application Ability and 3. Professional and Personal Attributes at the following levels:
Introductory
1.1 Comprehensive, theory-based understanding of the underpinning natural and physical sciences and the engineering fundamentals applicable to the engineering discipline. (LO: 2N 3N)
3.3 Creative, innovative and pro-active demeanour. (LO: 1N 3N)
Intermediate
1.3 In-depth understanding of specialist bodies of knowledge within the engineering discipline. (LO: 2I 3I)
1.4 Discernment of knowledge development and research directions within the engineering discipline. (LO: 1N 2I)
1.5 Knowledge of engineering design practice and contextual factors impacting the engineering discipline. (LO: 1N 2N 5I)
1.6 Understanding of the scope, principles, norms, accountabilities and bounds of sustainable engineering practice in the specific discipline. (LO: 5I 6I)
2.1 Application of established engineering methods to complex engineering problem solving. (LO: 2N 3I)
2.4 Application of systematic approaches to the conduct and management of engineering projects. (LO: 3I)
3.2 Effective oral and written communication in professional and lay domains. (LO: 5I)
3.4 Professional use and management of information. (LO: 4I 5I)
3.6 Effective team membership and team leadership. (LO: 5I 6I)
Advanced
2.2 Fluent application of engineering techniques, tools and resources. (LO: 3A 5N)
2.3 Application of systematic engineering synthesis and design processes. (LO: 3A)
3.1 Ethical conduct and professional accountability. (LO: 3I 4A 6N)
3.5 Orderly management of self, and professional conduct. (LO: 4A 5I)

Note: LO refers to the Learning Outcome number(s) which link to the competency and the levels: N – Introductory, I – Intermediate and A - Advanced.
Refer to the Engineering Postgraduate Units Moodle site for further information on the Engineers Australia's Stage 1 Competency Standard for Professional Engineers and course level mapping information
https://moodle.cqu.edu.au/course/view.php?id=11382

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 - 20%	•	•				
2 - Written Assessment - 20%			•	•		
3 - Written Assessment - 20%					•	•

Assessment Tasks	Learning Outcomes					
	1	2	3	4	5	6
4 - Project (applied) - 30%		•	•			
5 - Presentation - 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 - Written Assessment - 20%	○	○				○		
2 - Written Assessment - 20%			○	○	○	○		
3 - Written Assessment - 20%		○			○		○	
4 - Project (applied) - 30%	○		○	○				
5 - Presentation - 10%		○				○	○	

Textbooks and Resources

Textbooks

Information for Textbooks is not yet available.
The textbooks have not yet been finalised.

IT Resources

You will need access to the following IT resources:

Referencing Style

Information for Referencing Style has not been released yet.
This unit profile has not yet been finalised.

Teaching Contacts

Information for Teaching Contacts has not been released yet.
This unit profile has not yet been finalised.

Assessment Tasks

Information for Assessment Tasks has not been released yet.
This unit profile has not yet been finalised.

Academic Integrity Statement

Information for Academic Integrity Statement has not been released yet.
This unit profile has not yet been finalised.