

In Progress

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



ENEG13001 Humanitarian Engineering Project

Term 2 - 2024

Profile information current as at 15/05/2024 07:17 pm

All details in this unit profile for ENEG13001 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 must complete a two-week mobility trip as a compulsory practicum and work on an international humanitarian engineering project for a developing or marginalised community. Places are limited to self-paying participants and recipients of a New Colombo Plan Mobility Scholarship. Through collaborative discussions with your host community, you will critically analyse the development context and identify wants, needs, strengths and opportunities for social innovation. You will make recommendations by applying principles of sustainable development, human-centred design and systems engineering. You will create a project implementation plan, generate rapid prototypes and present your design to community members and assess its long-term viability. You will demonstrate ethical conduct and professional accountability, team membership and team leadership, knowledge management and a creative, innovative and proactive demeanour. Additional financial assistance for mobility trips is available by application for an OS-Help loan.

Details

Career Level: *Undergraduate*

Unit Level: *Level 3*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

Pre-requisites or Co-requisites

At least 48 credit points successfully completed, including ENEG11007 OR ENEG11002. Head of Course permission is required before enrolling in 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 - 2024

- Mixed Mode

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 6-credit Undergraduate unit at CQUniversity requires an overall time commitment of an average of 12.5 hours of study per week, making a total of 150 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. **Oral Examination**

Weighting: 15%

2. **Presentation**

Weighting: 15%

3. **Written Assessment**

Weighting: 30%

4. **Portfolio**

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 Coordinator reflections

Feedback

Students should observe how they address UN Sustainable Development Goals (USDG) through their projects

Recommendation

Introduce UN Sustainable Development Goals (USDGs) and ask students to identify how they can address USDGs through their projects. Modify the portfolio assessment to include reflections on addressing USDGs.

Unit Learning Outcomes

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

1. Establish a framework for identifying community needs and opportunities for social innovation in a developing or marginalised community
2. Clarify development contexts and opportunities for humanitarian engineering projects by engaging in collaborative discussions with community members
3. Develop a humanitarian engineering project concept based on initial design ideas and potential solutions
4. Design and develop rapid project prototypes to solicit community feedback
5. Create a project implementation plan including assessment of the long-term viability of the design in terms of ongoing use by the community, ongoing maintenance and end of life arrangements
6. Demonstrate cross-cultural engagement, collaboration, project management and presentation of results in both verbal and written forms.

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 3.1 Ethical conduct and professional accountability. (LO: 1N 2N)

Intermediate 2.2 Fluent application of engineering techniques, tools and resources. (LO: 4I) 3.3 Creative, innovative and proactive demeanour. (LO: 3I 4I) 3.4 Professional use and management of information. (LO: 1I 2I 5I)

Advanced 1.4 Discernment of knowledge development and research directions within the engineering discipline. (LO: 3A 4A) 1.5 Knowledge of engineering design practice and contextual factors impacting the engineering discipline. (LO: 3A 4A 5A) 1.6 Understanding of the scope, principles, norms, accountabilities and bounds of sustainable engineering practice in the specific discipline. (LO: 3A 4A 5A) 2.1 Application of established engineering methods to complex engineering problem solving. (LO: 3A 4A) 2.3 Application of systematic engineering synthesis and design processes. (LO: 3I 4A) 2.4 Application of systematic approaches to the conduct and management of engineering projects. (LO: 5A 6I) 3.2 Effective oral and written communication in professional and lay domains. (LO: 1I 2I 6A) 3.5 Orderly management of self, and professional conduct. (LO: 1I 2I 6A) 3.6 Effective team membership and team leadership. (LO: 2A 6A)

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 Undergraduate Course 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=1511>

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 - Oral Examination - 15%	•					
2 - Presentation - 15%	•	•	•		•	
3 - Written Assessment - 30%		•	•	•		•
4 - Portfolio - 40%				•	•	•

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes					
	1	2	3	4	5	6
1 - Communication	•	•			•	•
2 - Problem Solving			•	•	•	
3 - Critical Thinking	•	•	•	•	•	•
4 - Information Literacy	•	•				
5 - Team Work	•	•	•	•		•
6 - Information Technology Competence						
7 - Cross Cultural Competence	•	•	•		•	•
8 - Ethical practice	•	•	•			•
9 - Social Innovation						
10 - 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	9	10
1 - Oral Examination - 15%	•	•	•	•			•	•		

Assessment Tasks	Graduate Attributes									
	1	2	3	4	5	6	7	8	9	10
2 - Presentation - 15%	•	•	•	•	•	•	•	•		
3 - Written Assessment - 30%	•	•	•	•		•	•	•		
4 - Portfolio - 40%	•	•	•		•	•	•	•		

Textbooks and Resources

Information for Textbooks and Resources has not been released yet.

This information will be available on Monday 17 June 2024

Academic Integrity Statement

Information for Academic Integrity Statement has not been released yet.

This unit profile has not yet been finalised.