In Progress

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

ENEG11005 *Introduction to Contemporary Engineering*

Term 2 - 2024

Profile information current as at 14/05/2024 04:39 am

All details in this unit profile for ENEG11005 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 contemporary engineering to all undergraduates. First, you will learn about the levels of practice within the engineering profession and the corresponding graduate capabilities developed by our courses. Then you learn about study support services and effective study methods to facilitate a smooth transition to higher education. For most of the term, in this double-weighted unit, you will simultaneously develop technical and professional skills to establish a strong foundation for engineering problem-solving. The technical stream introduces coding, sketching, visualisation, and computer-aided drafting. At the same time, the professional stream teaches engineering values, including sustainable and ethical development, effective communication, time management, independent learning, and working with innovation, risks, people, and complex projects. Ultimately, this unit will test your ability to apply knowledge and skills to complete an authentic team project that incorporates the breadth of contemporary engineering. Successful completion of this unit will prepare you for the following project-based learning units.

Details

Career Level: *Undergraduate*
Unit Level: *Level 1*
Credit Points: *12*
Student Contribution Band: *8*
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 2 - 2024

- Mixed Mode
- Online

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 Undergraduate 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 Student Satisfaction Survey

Feedback
Students appreciated the opportunity to participate in the learning sessions and helpful feedback received.

Recommendation
Students should continue to receive the same high-level support to foster a positive learning environment that facilitates the acquisition of engineering skills and concepts.

Feedback from Student Satisfaction Survey

Feedback
Students reported satisfaction with the high-quality resources

Recommendation
Students should continue to have access to a wide range of learning materials to succeed and gain a deep understanding of the unit content.

Feedback from Student Satisfaction Survey

Feedback
The unit helped students to develop the engineering mindset and skills

Recommendation
Students should receive the same level of support so that to understand the essential engineering practices to help them think more holistically.

Feedback from Student Satisfaction Survey

Feedback
Moodle platform was user-friendly and facilitated straightforward communication with lecturers, ensuring a seamless learning experience for students.

Recommendation
The same Moodle layout should be continued to ensure the same seamless learning experience for students.

Feedback from Student Satisfaction Survey

Feedback
Students benefited from the efficient feedback and communication from the teaching team

Recommendation
Students should continue to receive timely responses to questions and concerns, as well as prompt assessment feedback.

Unit Learning Outcomes

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

1. Reflect on the individual skills, knowledge, and support services that promote effective study at the university
2. Apply coding skills to investigate alternate solutions for an engineering project
3. Produce freehand sketches and computer-aided drawings that follow Australian Standards
4. Develop and apply skills, knowledge, and values aligned with contemporary engineering, including ethical and sustainable practice
5. Formulate evidence-based opinions by locating, evaluating, and synthesising information from reputable sources
6. Provide evidence in individual and team-based scenarios of a professional capacity to work, learn, and communicate effectively in oral and written domains.

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: 4N 5N)

1.2 Conceptual understanding of the mathematics, numerical analysis, statistics, and computer and information sciences which underpin the engineering discipline. (LO: 4N 5N)

1.3 In-depth understanding of specialist bodies of knowledge within the engineering discipline. (LO: 2N 3N 4N 5N)

1.4 Discernment of knowledge development and research directions within the engineering discipline. (LO: 4N 5N)

1.5 Knowledge of engineering design practice and contextual factors impacting the engineering discipline. (LO: 2N 4N 5N)

1.6 Understanding of the scope, principles, norms, accountabilities, and bounds of sustainable engineering practice in the specific discipline. (LO: 4N 5N)

2.1 Application of established engineering methods to complex engineering problem-solving. (LO: 2N 3N 4N 5N)

2.2 Fluent application of engineering techniques, tools, and resources. (LO: 2N 3N 4N 5N)

2.3 Application of systematic engineering synthesis and design processes. (LO: 3N 4N 5N)

2.4 Application of systematic approaches to the conduct and management of engineering projects. (LO: 4N 5N)

3.1 Ethical conduct and professional accountability. (LO: 2N 3N 4N 5N 6N)

3.2 Effective oral and written communication in professional and lay domains. (LO: 1N 2N 3N 4N 5N 6N)

3.4 Professional use and management of information. (LO: 1N 2N 3N 4N 5N)

3.5 Orderly management of self, and professional conduct. (LO: 1N 4N 6N)

3.6 Effective team membership and team leadership. (LO: 4N 6N)

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 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 - Reflective Practice Assignment - 10%	•					
2 - Written Assessment - 15%		•				
3 - Group Work - 35%			•	•	•	•
4 - Written Assessment - 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						

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.