

School of Engineering and Technology



CC31 Bachelor of Engineering (Honours)(Mechatronics)

Part Time Course Planner – Term 2 2019 onwards

Year	Unit Code	Unit Name	CP	Requisites	Ad. Stand	Comp Term /Status
Year 1	ENEG11008	Materials for Engineers	6			T2 2019
	MATH11218	Applied Mathematics	6	Anti-Req MATH12223 or MATH12224		T2 2019
	ENEG11005#	Fundamentals of Professional Engineering	12			T1 2020
	ENEG11006	Engineering Statics	6			T1 2020
Year 2	ENEG11007	Engineering Industry Project Investigation	6	Pre-Req ENEG11005 or ENEG11001		T2 2020
	ENEG11009	Fundamentals of Energy and Electricity	6			T2 2020
	MATH11219	Applied Calculus**	6	Pre-Req Refer to Handbook		T3 2020
Year 3	MATH12222	Advanced Mathematical Applications	6	Pre-Req MATH11219		T1 2021
	ENEE12014#	Electrical Circuit Analysis	6	Pre-Req PHYS11185 or ENEG11009 & MATH11219		T1 2021
	ENEE12016#	Signals and Systems	6	Pre-Req ENEE12014		T2 2021
	MATH12225	Applied computational modelling	6	Pre-Req MATH12222 or MATH13218		T2 2021
Year 4	ENEG12007	Design and Project Management	6	Pre-Req Refer to Handbook		T1 2022
	ENEM12010	Engineering Dynamics	6	Pre-Req ENEG11006 & MATH11219		T1 2022
	ENEX12002	Introductory Electronics	6	Pre-Req MATH11219 & (ENEG11009 or PHYS11185)		T2 2022
	ENEX12001#	Electrical Power and Machines	6	Pre-Req Refer to Handbook		T2 2022
Year 5	ENEX13004	Advanced Dynamics and Robotics	6	Pre-Req ENEM12010 & MATH12222 & ENEE12016		T1 2023
	ENEX13002#	Power Electronics	6	Pre-Req ENEX12002 & ENEX12001		T1 2023
	ENEE13019#	Control Systems Analysis and Design	6	Pre-Req ENEE13020 & ENEE13018		T2 2023
	ENEM12009	Structural Mechanics	6	Pre-Req MATH11219, ENEG11006 & ENEG11008		T2 2023
Year 6	ENEE14006	Embedded Microcontrollers#	12	Pre-Req ENEE13020 Co-Req: ENEE13018		T1 2024
	ENEX13003	Design of Mechatronics Elements	6	Pre-Req ENEG11005 & ENEM12010		T1 2024
	ENEX13001	Instrumentation and Industrial Automation	6	Pre-Req ENEX12002 & ENEE12016		T2 2024
	ENEX13004	Advanced Dynamics and Robotics	6	Pre-Req ENEM12010 & MATH12222 & ENEE12016		T2 2024
	ENEX14001#	Mechatronics Systems Design#	12	Pre-Req ENEX13001 & ENEX13003		T1 2025
	ENEX13006	Thermofluids Theory and Applications	6	Pre-Req Refer to Handbook		T2 2025
		Professional Practice Elective	6			T2 2025
Year 8	ENEG14003	Engineering Project Planning	6	Pre-Req Refer to Handbook		T1 2026
	ENEX13005	Machine Design and Vibrations	6	Pre-Req: Refer to Handbook		T1 2026
	ENEG14005	Engineering Project Implementation	12	Pre-Req: ENEG14003		T2 2026
Total Units:						

** Available over Term 3

* Compulsory Residential School

Optional Residential School

CP = Credit Points

Permanent DISCLAIMER: International students MUST enrol in both compulsory Terms (Term 1 & 2) to achieve an academic load of 48 credit points in an academic year to successfully complete their course in accordance with the Confirmation of Enrolment (CoE) duration. If International students fail to enrol in an academic load of 48 credit points per year, it is compulsory they study over Term 3.

For information on the terminology used in the above course planner, please refer to the Glossary on the last page of this document.

Important Note: This Course Planner has no formal or legal status but is used to assist students in planning their course.

Students should refer to the official University database and/or University transcripts to ensure they are meeting course requirements.

Last Updated: 04/01/2019

MORE DETAILS:

To satisfy the requirements for the award of CC31 Bachelor of Engineering (Honours), students must complete 27 units (144 credit points).

Recommended Study Schedule

Students should complete units in an order that is as close as possible to the recommended structure set out in this course planner. Students should concentrate on completing all first year units before moving on to second year units, and all second year units before moving on to third year units.

Course Structure Requirements

In the CC31 Bachelor of Engineering (Honours), students are required to complete the following course structure:

- 7 Core Units
- 19 Major Units
- 1 Professional Practice Elective

Course Duration Requirements

Full Time Duration 4 Years

Part Time Duration 8 Years

Please also note that if you fail units or take a Leave of Absence, your course duration and completion timeframe may be extended.

Exit Awards CL42 Diploma of Engineering Studies

Professional Accreditation

The civil, electrical and mechanical majors in this course are accredited by Engineers Australia as meeting Stage 1 Competency Standard for Professional Engineer.

Deferment/Leave of Absence

Domestic students in the CC31 Bachelor of Engineering (Honours) degree are permitted to defer the initial offer of their degree for a maximum of 12 months before their offer is withdrawn. Furthermore, domestic students may also take an approved Leave of Absence (LOA) once they have commenced their course of study however only a maximum of 12 months can be granted without requesting further approval from the Head of Course.

You can apply for a deferment or LOA [here](#).

International students are not permitted to defer their initial offer or take a Leave of Absence unless otherwise discussed with their Home Campus.

Credit Transfer

If you have undertaken study in the last ten years, or have relevant in-formal or non-formal learning, you may be eligible for credit towards your course. Please note that some courses have reduced timeframes within which prior study remains eligible for credit. Please refer to the [CQUni Handbook](#) for specific credit time limits relating to your course.

To submit an application for credit, please refer to the [Credit Calculator](#) or contact the Academic Pathways Team via their email credit@cqu.edu.au. Further information about the credit process can also be found on the [Credit for Prior Learning](#) webpage.

Credit applications should be submitted at least four (4) weeks before the relevant term commences. Applications must be complete with all supporting documentation to be assessed by CQUniversity. CQUniversity cannot obtain documents from other institutions, organisations or individuals.

Residential Schools

Students studying via Online studies may be required to attend compulsory on-campus residential schools and have been marked with an asterisk (*) in the above course planner.

The units that require a compulsory residential school must be enrolled in as “Mixed Mode” under the unit availabilities in MyCentre.

For more information on the various units containing residential schools, please refer to the following link in the CQUni Handbook: <https://handbook.cqu.edu.au/resschools/index> or contact the Unit Coordinator directly.

Unit Coordinator contact information can be found via the Unit Profiles in the following link: <https://my-courses.cqu.edu.au/pub/profiles/search>

Electives

Students in the CC31 Bachelor of Engineering (Honours) course must successfully complete a total of 3 Elective units. Of these 3 Electives, one must be a Professional Practice Elective.

Students who want to study a unit outside the pre-approved list for their relevant discipline, will need to contact their Discipline Leader to seek approval to study the unit as one of their electives.

For Civil Students (Select a maximum of two units):

- MATH11247 Foundation Mathematics (please note that this unit can only be done at the commencement of the course, before completing any other Maths units) (T1)
- BLAR12038 Building Industry Contracts (T1)
- BLAR13047 Construction Economics 1 (T 1)
- BLAR13035 Building Contract Administration (T 2)
- BLAR13040 Building Life Cycle Maintenance (T2)
- BLAR11039 Building Law & Regulations (T3)
- ENEM13012 Maintenance Engineering (T1)
- ENEG13001 Humanitarian Engineering Project (T3)

Engineering Professional Practice Electives: (CC31 students must complete ONE of these)

- ENEP11007 Industry Practice Preparation (Term 2)
 - ENEP12007 Engineering Business Fundamentals (Term 1)
 - ENEP12008 Engineering Supervisor Development (Term 1)
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- Undergraduate Level One Unit Codes begin with a "11" (e.g. MRKT11029)
 - Undergraduate Advanced Level Unit Codes begin with either a "12", "13", or "19" (e.g. MGMT19128)

Degrees In Engineering with Honours

Engineering students will be eligible for honours according to the University's 'Grade Point Average' (GPA) honours calculation rules, except that third class honours will not be awarded.

The GPA of a student's results over the entire course of study must be at least 5.00 to be eligible for honours. Failure to meet this GPA will result in students not being eligible for the award of 1st or 2nd Class Honours, regardless of their performance in the required 48 units of credit of engineering unit study (as detailed below) for honours calculation.

Units comprising honours calculation (48 credit points):

Civil:

- ENEG14005 Engineering Project Implementation
- ENEC14014 Structural and Geotechnical Design
- ENEC14016 Transportation Design
- ENEC14017 Water Engineering

Practicum/Work Integrated Learning (WIL) Requirements

There is a requirement for 12 weeks of industry experience prior to graduation. Students must submit a formal report as per the Engineering Practice document including verification of the type of work undertaken. This is in accordance with current recommendations of the accrediting body, Engineers Australia.

Engineering Practice (Industry Experience) and Report

An integral part of the Bachelor of Engineering course, and a requirement of Engineers Australia for course accreditation, is that each student must gain at least 12 weeks of approved industry experience in an appropriate area of engineering. The student must also submit a report indicating the type of work done, the degree of responsibility involved, the person(s) to whom the student was directly responsible, and the general activities of the employer.

This report must be certified as correct by the employer and submitted by the end of the second week of the term following the vacation period of employment.

Further information regarding the reporting requirements refer to the 'Engineering Practice' document located [here](#)

Note that even if you are working full-time in industry whilst studying, you must still submit a report. However, if you are carrying out appropriate engineering work, you can use your normal employment as the basis of your report.

You should ensure that you submit your report in a timely manner prior to your expected graduation date. You will be assessed for eligibility to graduate immediately following Certification of Grades in your final Term of study. Please allow a 2 week turn-around time for assessment of your report. Failure to meet this deadline may result in a delay to your graduation date.

If you have any questions about your course, please contact the Course Advice Team: spc@cqu.edu.au or by visiting <http://handbook.cqu.edu.au/eforms/index> and filling out the 'Ask a Course Advisor' e-form.

PLEASE CHECK THE CQUNI HANDBOOK FOR ALL TERM AVAILABILITIES AND PRE-REQUISITES AS THEY MAY CHANGE FROM YEAR TO YEAR <http://handbook.cqu.edu.au>

GLOSSARY

- **Course**: A course is the combination of units that contribute towards either a CQUniversity award qualification or non-award study.
- **Course Code**: A course code identifies the specific course a student may be studying at CQUniversity.
- **Unit**: A unit is the individual subject students must complete in order to graduate from their course.
- **Unit Code**: A unit code identifies a specific unit that a student is enrolled in under their course.
- **Pre-Requisite (Pre-Req) Unit**: A pre-req unit is a unit which students must pass before being allowed to enrol in the subsequent unit.
- **Co-Requisite (Co-Req) Unit**: A co-req unit is a unit that must be studied at the same time as another unit.
- **Anti-Requisite (Anti-Req) Unit**: An anti-req unit is an old unit that has been replaced by a new unit and students are not permitted to study the old unit.
- **Credit Points (CP)**: Credit Points are the numerical value of a unit which contributes to the total Credit Points for a course.
- **Core Unit**: A core unit is a compulsory unit that a student must study to meet the requirements of their course.
- **Elective Unit**: An elective unit is a unit within a course that is not compulsory and students may have a choice in what unit they study, provided it meets the elective requirements of their course.
- **Major**: A major is a specific area within a course where a student specialises in and is normally made up of 8 units for undergraduate courses, and 4 units for postgraduate courses. Not all courses have majors.
- **Double Major**: A double major is where students specialise in 2 areas of study and is normally made up of 16 units. Double majors are normally only available in undergraduate courses.
- **Minor**: Like a major, a minor is a specific area within a course where a student specialises and is normally made up of 4 units.
- **Term**: A specified period of time for higher education units in which teaching, learning and assessment occurs. CQUniversity offers 3 Academic Terms per year: Term 1, Term 2 and Term 3.