

School of Engineering and Technology

CC32 Bachelor of Engineering (Honours) & Diploma of Professional Practice (Co-Op Engineering) Mechanical Major Full Time Study Plan – Term 1 2019 onwards

Year	Unit Code	Unit Name	CP	Requisites	Ad. Stand	Comp Term /Status
Year 1	ENEG11005 *	Fundamentals of Professional Engineering	12			T1 2019
	MATH11218	Applied Mathematics	6	Anti-Req: CQ08, MATH12223 and MATH12224		T1 2019
	ENEG11006 **	Engineering Statics	6			T1 2019
	ENEG11007	Engineering Industry Project Investigation	6	Pre-Req: ENEG11005 or ENEG11001		T2 2019
	ENEG11008 *	Materials for Engineers	6			T2 2019
	ENEG11009 * **	Fundamentals of Energy and Electricity	6			T2 2019
	MATH11219 **	Applied Calculus	6	Pre-Req: MATH11218 Anti-Req: MATH12223 or MATH12224		T2 2019
Year 2	ENEG12007	Design and Project Management	6	Pre-Req: See CQUni Handbook		T1 2020
	ENEM12009	Structural Mechanics	6	Pre-Req: MATH11219 and (ENEG11006 or ENEM12007) and (ENEG11008 or ENEG12005)		T1 2020
	ENEM12010	Engineering Dynamics	6	Pre-Req: ENEG11006 and MATH11219		T1 2020
	MATH12222	Advanced Mathematical Applications	6	Pre-Req: MATH11219		T1 2020
	ENEM12006 *	Fluid Mechanics	6	Pre-Req: MATH11219 and (ENEG11006 or ENEM12007) and (ENEG11009 or PHYS11185)		T2 2020
	ENEM13018 #	Materials and Manufacturing	6	Pre-Req: (ENEG11008 or ENEG12005) and (MATH11218 or MATH11219)		T2 2020
	ENEM13014 *	Thermodynamics	6	Pre-Req: MATH11218 and (ENEG11009 or PHYS11185)		T2 2020
	MATH12225	Applied Computational Modelling	6	Pre-Req: MATH12222 or MATH13218		T2 2020
	ENEP11007	Engineering Employment Preparation	6			T2 2020

STUDY PLAN CONTINUED ON NEXT PAGE

Year	Unit Code	Unit Name	CP	Requisites	Ad. Stand	Comp Term /Status
Year 3	ENEP11006	Industry Practice 1	12	Pre-Req ENEP11007		T1 2021
		<i>Mechanical Elective (See Notes on Page 5)</i>	6			T1 2021
	ENEM13012	Maintenance Engineering	6	Pre-Req: ENEG12004 or ENEG12007		T2 2021
	ENEM13015	Design of Machine Elements	6	Pre-Req: MATH11219 and (ENEM12009 or ENEM14012)		T2 2021
	ENEM14015 *	Dynamic System Modelling and Control	12	Pre-Req: ENEM12007 or ENEM12010		T2 2021
	ENEP11010	Industry Practice Review	6	Pre-Req ENEP11006		T2 2021
Year 4	ENEM12008 *	Solid Materials Handling	6	Pre-Req: (PHYS11184 or ENAG11005 or ENEG11006) and (MATH11218 or MATH11160)		T1 2022
	ENEM14011 *	Energy Conversion	6	Pre-Req: ENEM13014 or ENEM12003		T1 2022
	ENEM14016 *	Fluid Machinery	12	Pre-Req: (ENEM12006 or ENEM12001) and (ENEM12007 or ENEM12010 or ENEM12004)		T1 2022
	ENEP12007	Engineering Business Fundamentals	6			T1 2022
	ENEP12010	Industry Practice 2	12	Pre-Req ENEP11001 and ENEP12007		T2 2022
	ENEG14003	Engineering Project Planning	6	Pre-Req: Completion of all prior units in the nominal course structure - to be checked by Head of Course or Unit Coordinator during facilitation of the enrolment process.		T2 2022
		<i>Mechanical Elective (See Notes on Page 5)</i>	6			T2 2022
Year 5	ENEM14014 *	Capstone Thermofluid Engineering	12	Pre-Req: (ENEM13014 or ENEM12003) and (ENEM12006 or ENEM12001)		T1 2023
	ENEG14005	Engineering Project Implementation	12	Pre-Req: ENEG14003		T1 2023
	ENEP12008	Engineering Supervisor Development	6	Pre-Req ENEP12010 or 12 weeks industry practice		T1 2023
Total Units: 32			234			

**Available over Term 3

* Compulsory Residential School

Optional Residential School

✓ Completed

CP = Credit Points

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

Important Note: This Study Plan 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.

MORE DETAILS:

To satisfy the requirements for the award of CC32 Bachelor of Engineering (Honours) (Mechanical) and Diploma of Professional Practice (Co-Op Engineering), students must complete 32 units (234 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 study plan. 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 CC32 Bachelor of Engineering (Honours)(Mechanical) and Diploma of Professional Practice (Co-Op Engineering), students are required to complete the following course structure:

- 7 Core Units
- 6 Diploma of Professional Practice Units
- 17 Major Units
- 2 Elective Units

Course Duration Requirements

Full Time Duration 4.5 years full time

Part Time Duration 9 years part time

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

Interim Awards CL42 Diploma of Engineering Studies
 CC31 Bachelor of Engineering (Honours)

Exit Awards CL42 Diploma of Engineering Studies
 CC31 Bachelor of Engineering (Honours)

Professional Accreditation

All Majors in this course are accredited by Engineers Australia as meeting Stage 1 Competency Standard for Professional Engineer. See: www.engineersaustralia.org.au

Deferment/Leave of Absence

Domestic students in the Bachelor of Engineering (Honours) and Diploma of Professional Practice (Co-Op Engineering) 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 Distance education may be required to attend compulsory on-campus residential schools and have been marked with an asterisk (*) in the above study plan.

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 CC32 Bachelor of Engineering (Honours) (Mechanical) and Diploma of Professional Practice (Co-Op Engineering) course must successfully complete a total of 2 Elective units.

For Mechanical 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)
- ENEX13001 Instrumentation & Industrial Automation (T2)
- MGMT19106 Supply Chain Management (T1)
- MGMT19126 Product & Operations Management (T1)
- MGMT13151 Entrepreneurship, Innovation & New Ventures (T2, T3)
- ENAR12013 Mine Planning & Design (T2)
- ENAR12004 Mine Management & Safety (T1)
- ENAR12014 Introduction to Mining Technology & Mineral Processes (T1)
- ENEG13001 Humanitarian Engineering Project (T3)

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)

Practicum / Work Requirements

When undertaking the following units, students will also undertake an industry work placement:

- ENEP11006 Industry Practice 1 – 24 weeks industry placement
- ENEP12010 Industry Practice 2 – 24 weeks industry placement

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.