

# Bachelor of Engineering (Honours) (Environmental)

## CHEMICAL ENGINEERING MINOR



Commenced in 2015 and 2016



Studying at Callaghan

This Program Plan is an enrolment guide to ensure you are on track to graduate. The courses in coloured boxes have changed for your program. Further details on the teach-out arrangements can be found in your [Program Handbook](#). If at any time you wish to vary from this program plan seek prior advice from your [Academic Program Advisor](#) to ensure you remain on track.



### Semester 1

Year 1

<b>CHEM1010*</b> Introductory Chemistry I Replaces GENG1803	<b>ENGG1500</b> Introduction to Professional Engineering Replaces GENG1803	<b>MATH1110</b> Mathematics for Engineering, Science and Technology 1 <i>Replaces option of MATH1110 OR MATH1210</i>	<b>SURV1200</b> Introduction to Surveying Replaces SURV1110
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### Semester 2

<b>CHEM1020*</b> Introductory Chemistry II Replaces GENG1001	<b>CIVL1100</b> Fundamentals of Engineering Mechanics Replaces GENG1001	<b>ENGG1003</b> Introduction to Procedural Programming <i>Replaces GENG1002 pre-2017, ENGG1002 pre-2021 In 2021 changed from Sem 2 to Sem 1</i>	<b>MATH1120</b> Mathematics for Engineering, Science and Technology 2 <i>Replaces option of MATH1210 OR MATH1220</i>
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Year 2

<b>CHEM2110</b> Applied Analytical Chemistry Replaces CHEM2610	<b>CIVL2050</b> Engineering Computations and Probability	<b>MATH2310</b> Calculus of Science and Engineering	<b>ELECTIVE</b>
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<b>ENGG2300</b> Engineering Fluid Mechanics Replaces CIVL2310	<b>CIVL2280</b> Geomechanics 1	<b>SURV3650</b> GIS and Remote Sensing Replaces SURV2650	<b>CHEE2695</b> Energy Transfer and Technologies Replaces CHEE2691 <i>In 2021 changed from Sem 2 to Sem 1</i>
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Year 3

<b>ENVS2002</b> Environmental Legislation & Planning	<b>CHEE3690</b> Environ. Process Technology	<b>CIVL3330</b> Hydrology Replaces CIVL4330	<b>CHEE3735</b> Mass Transfer Processes Replaces CHEE3741
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<b>CIVL3410</b> Hydrobiological Modelling	<b>CIVL3431</b> Land Surface Process and Management	<b>CIVL3470</b> Contaminant Hydrogeology	<b>CIVL4450</b> Water Engineering
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Year 4

<b>ENGG3500</b> Managing Engineering Projects Replaces GENG3830	<b>CIVL4591</b> Environmental Engineering Project 1	<b>CIVL4640#</b> Project S1	<b>ELECTIVE</b>
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<b>CIVL4601</b> Environmental Engineering Project 2	<b>BIOL1002</b> Organisms to Ecosystems	<b>ENGG4500</b> Engineering Complexity Replaces PHIL3910	<b>CHEE3745</b> Process Modelling and Separation Processes Replaces CHEE3731
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**Program Plan Key:** = Core = Minor = Elective = Changes from 2017 onwards = Changes from 2019 onwards

To be eligible to graduate make sure you have completed 320 units (10 units = 1 course unless otherwise specified) which meet the following criteria:

- ✓ Core courses – 250 units.  
*Prior to 2021*, students could choose to complete either MATH1110 and MATH1120, *OR* MATH1210 and MATH1220. Choice of maths courses is based on your assumed knowledge. To find out which MATH course you should enrol in please see the [Enrolling in Maths information](#). More information is in your [Program Handbook](#).  
*After 2021*, the option to do MATH1210 and MATH1220 has been removed from the program. *From 2021 onwards*: 1) if you have not yet completed MATH1210 you must complete MATH1110; and 2) if you haven't completed MATH1220 then you must complete MATH1120.
- \* CHEM courses – 20 units. Select both CHEM1010 and CHEM1020 (Callaghan) *OR* CHEM1110 and CHEM1120 (Ourimbah).
- # Students may choose to complete either CIVL4640 Project S1 (Semester 1) or CIVL4660 Project S2 (Semester 2), whichever best fits their program. Course content and assessment are identical.
- ✓ Minor – 50 units (10 units in Year 2, 10 in Year 3 and 30 units in Year 4).
- ✓ Electives – 20 units. Visit the [Course Handbook](#) to see a list of available Electives.
- ✓ *Refer to the transition document in the [Program Handbook](#) for further information*
- ✓ It is also a requirement that students complete a total of 12 weeks of [industrial experience](#).
- ✓ The duration of this program is 4 years full time (40 units per semester) or part time equivalent.
- ✓ The maximum time to complete this program is 10 years.



Some courses have assumed knowledge and/or requisites, please refer to the individual [Course Handbook](#).

The [Program Handbook](#) has valuable information on program structure and requirements, if you are intending on studying part time or varying from this program plan please seek prior advice from your [Academic Program Advisor](#).