

Bachelor of Engineering (Honours) (Mechanical)

 **Commenced in Semester 2 2016**

 **Studying at Callaghan**

This program plan is an enrolment guide to ensure you are on track to graduate. 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 [Program Advisor](#) to ensure you remain on track.



Year
1

Semester 2

CIVL1100 Fundamentals of Engineering Mechanics Replaced GENG1001	MATH1110 Mathematics for Engineering, Science & Technology 1 <i>(Replaces option of MATH1110 OR MATH1210)</i>	MECH1110 Introduction to Mechanical Engineering Design Replaced GENG1000 <i>In 2021 changed from Sem 2 to Sem 1</i>	ELECTIVE <i>This can be of any level, and can be studied in any term/year, including summer or winter</i>
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Semester 1

Year
2

ENGG1003 Introduction to Procedural Programming Replaced GENG1003 <i>In 2021 changed from Sem 2 to Sem 1</i>	ENGG1500 Introduction to Professional Engineering Replaced GENG1803	MATH1120 Mathematics for Engineering, Science & Technology 2 <i>(Replaces option of MATH1120 OR MATH1220)</i>	PHYS1205 Fundamentals of Engineering Physics or PHYS1210 Advanced Physics I
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ELEC1310 Introduction to Electrical Engineering Replaced ELEC1300	MATH2310 Calculus of Science and Engineering	MECH1750 Engineering Materials 1 Replaced MECH2250	MECH2430 Mechanics of Solids 1 Replaced MECH2420
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Year
3

ELECTIVE <i>This can be of any level, and can be studied in any term/year, including summer or winter</i>	DIRECTED <i>Please note, this can be studied in any semester/year</i>	MECH2110 Mechanical Engineering Design 1	MECH2360 Dynamics of Machines Replaced MECH2350
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ENGG2300** Engineering Fluid Mechanics <i># From 2021 ENGG2300 will count in place of MECH2710</i>	ENGG2440 Modelling and Control Replaced MCHA2000	MECH2450 Engineering Computations 2	DIRECTED <i>Please note, this can be studied in any semester/year</i> Replaced MECH3440
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Year
4



ENGG3500 Managing Engineering Projects Replaced GENG3830	MECH3110 Mechanical Engineering Design 2	MECH3400 Materials Science and Engineering 2	MECH3700* Transport Phenomena <i>* Refer to teach out document</i>
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MECH4841A Mechanical Engineering Project A <i>This can be studied in either semester</i>	ENGG4500 Engineering Complexity Replaced PHIL3910/PHIL3930	MECH3750* Applied Engineering Thermodynamics <i>* Refer to teach out document</i>	DIRECTED <i>Please note, this can be studied in any semester/year</i>
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Professional Practice: Exposure to Professional Practice/Industrial Experience 12 weeks

Year
5

AERO3600 Embedded Control Systems <i>From 2020 onwards Replaced ENGG3440</i> <i>In 2018-2019, ENGG3440 Replaced ELEC4400</i>	MECH4410 Mechanics of Solids 2 and FEA Replaces MECH4400	MECH4841B Mechanical Engineering Project B (20 units) <i>This course must be taken in the semester immediately following MECH4841A</i>
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Program Plan Key:  = Core  = Directed  = Elective
 = Compulsory Program Requirement

✓ Core courses – 270 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](#). Note that due to course offerings it is recommended midyear commencing students take MATH1110 and MATH1120, and that you also consider the University's [Summer School](#) offerings following your first semester.

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.

Students are required to complete just one of these two courses. Refer to the teach-out document in the [Program Handbook](#) for further information.

* Refer to the teach-out document in the [Program Handbook](#) for further information.

** ENGG2300 has been added to the degree with **MECH2710** removed. When **MECH2710** itself was introduced, it was not a direct replacement of **MECH2700**. If you have not completed all 30 units of **MECH2700**, **MECH3700** and **MECH3750**, please refer to the [Teach-out Arrangement](#) document on your program handbook. If you require further enrolment advice please contact your [Program Convenor](#).

✓ Directed courses – 30 units.

✓ Electives – 20 units of any [level](#). Visit the [Course Handbook](#) to see a list of available electives.

✓ No more than 120 units is permitted at the 1000 level.

✓ It is also a requirement that students complete a total of 12 weeks of exposure to [professional practice/industrial experience](#).

Duration of this program is 4 years full time (40 units per semester) or part time equivalent.

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](#).

Bachelor of Engineering (Honours) (Mechanical) – Directed Courses

Please note: if you have **not** previously completed either of these philosophy directed courses ('completion' also includes if you received credit), you will instead study [ENGG4500](#) – Engineering Complexity

Students previously chose **10 units** from the following Philosophy Directed courses to complete.

PHIL3910 Ethics, Technology and Engineering – *no longer offered*
PHIL3930 Human Values and Commercial Practice – *no longer offered*

Directed Courses

Subject to change - Please refer to the [Program Handbook](#) for up to date information.

Choose **20 units** from the following B Engineering Directed courses to complete from this list.

Note: Choose an additional 10 units if you have **not yet completed** MECH3440. If you have completed MECH3440 you will **not** study an additional directed course.

MECH3130 Mechanics of Bulk Solids and Particulates
MECH3780 Fluid Mechanics 2 and CFD
MECH4220 Bulk Materials Handling and Transportation
MECH4580 Computer Aided Engineering and Manufacturing (*please see the course handbook for enrolment restrictions*)
MECH4830 Engineering Economic Analysis – *not currently offered*
MECH4890 Computer Simulation and Modelling – *not currently offered*
RENE3000 Solar and Wind (*replaces MECH3760*)