PROGRAM PLAN

BACHELOR OF MECHANICAL ENGINEERING (HONOURS)

PROGRAM OPTION:
Full time or part time

START DATE:
Semester 2 2017 - 2020

LOCATION:
Callaghan

This program plan is an enrolment guide to ensure you are on track to graduate. If at any time you wish to vary from this program plan seek advice from your Academic Program Advisor to ensure you remain on track.

PROGRAM HANDBOOK

COURSE HANDBOOK

NAME:

STUDENT NO.:

COURSE STATUS KEY
C = Completed
En = Enrolled
NS = Not Started

2021 PROGRAM PLAN FOR STUDENTS WHO COMPLETED YEAR 1

YEAR 1 SEMESTER 2	CIVL1100 Fundamentals of Engineering Mechanics CORE	MATH1110 * Maths for Engineering, Science & Technology 1 CORE *(Replaces option of MATH1110 OR MATH1210)*	MECH1110 Introduction to Mechanical Engineering Design CORE *In 2021 changed from Sem 2 to Sem 1*	ENGG2100 Engineering Risk & Uncertainty CORE *# From 2021 ENGG2100 will count in place of PHYS1210*
YEAR 2 SEMESTER 1	ELECTIVE *Please see information about electives on the last page* *Electives can be taken in any term, including summer or winter*	ENGG1003 Introduction to Procedural Programming CORE	ENGG1500 Introduction to Professional Engineering CORE	MATH1120 * Maths for Engineering, Science & Technology 2 CORE *(**Replaces** option of MATH1120 **OR** MATH1220)*
YEAR 2 SEMESTER 2	ELEC1310 Introduction to Electrical Engineering CORE	MATH2310 Calculus of Science & Engineering CORE	MECH1750 Engineering Materials 1 CORE *(Replaces MECH2250)*	MECH2430 Mechanics of Solids 1 CORE
YEAR 3 SEMESTER 1	ELECTIVE *Please see information about electives on the last page* *Electives can be taken in any term, including summer or winter*	MECH2110 Mechanical Engineering Design 1 CORE	MECH2360 Dynamics of Machines CORE	MECH3400 Materials Science & Engineering 2 CORE
YEAR 3 SEMESTER 2	ENGG2300 Engineering Fluid Mechanics CORE *(Replaces MECH2710)*	ENGG2440 Modelling & Control CORE	ENGG2500 Sustainable Engineering Practice CORE *In 2021 changed from Sem 1 to Sem 2*	MECH2450 Engineering Computations 2 CORE
YEAR 4 SEMESTER 1	ELECTIVE *Please see information about electives on the last page* *Electives can be taken in any term, including summer or winter*	ENGG3500 Managing Engineering Projects CORE	MECH3110 Mechanical Engineering Design 2 CORE	MECH3695 Heat Transfer CORE
YEAR 4 SEMESTER 2	MECH4841A Mechanical Engineering Project A CORE	ENGG4500 Engineering Complexity CORE	MECH3720 Thermodynamics CORE	MECH3780 Fluid Mechanics 2 & CFD CORE
YEAR 5 SEMESTER 1	ELECTIVE *10 units of electives may need to be 2000 level or higher.* *Please see information about electives on the last page*	MECH4410 Mechanics of Solids 2 & FEA CORE	MECH4841B Mechanical Engineering Project B (20 units) CORE *This course must be completed in the semester immediately following MECH4841A*	

COMPULSORY REQUIREMENT: EXPOSURE TO PROFESSIONAL PRACTICE (EEP)/INDUSTRIAL EXPERIENCE (IE) 12 WEEKS

PROGRAM PLAN

BACHELOR OF MECHANICAL ENGINEERING (HONOURS)

2021 PROGRAM PLAN FOR STUDENTS WHO COMPLETED YEARS 1 AND 2

YEAR 1

SEMESTER 2	**CIVL1100** Fundamentals of Engineering Mechanics **CORE**	**MATH1110 *** Maths for Engineering, Science & Technology 1 **CORE** *(**Replaces** option of MATH1110 **OR** MATH1210)*	**MECH1110** Introduction to Mechanical Engineering Design **CORE** *In 2021 changed from Sem 2 to Sem 1*	**ENGG2100** Engineering Risk & Uncertainty **CORE** *# From 2021 ENGG2100 will count in place of PHYS1210*

YEAR 2

SEMESTER 1	**ELECTIVE** *Please see information about electives on the last page* *Electives can be taken in any term, including summer or winter*	**ENGG1003** Introduction to Procedural Programming **CORE**	**ENGG1500** Introduction to Professional Engineering **CORE**	**MATH1120 *** Maths for Engineering, Science & Technology 2 **CORE** *(**Replaces** option of MATH1120 **OR** MATH1220)*
SEMESTER 2	**ELEC1310** Introduction to Electrical Engineering **CORE**	**MATH2310** Calculus of Science & Engineering **CORE**	**MECH1750** Engineering Materials 1 **CORE** *(Replaces MECH2250)*	**ELECTIVE** *Please see information about electives on the last page* *Electives can be taken in any term, including summer or winter*

YEAR 3

SEMESTER 1	**ELECTIVE** *Please see information about electives on the last page* *Electives can be taken in any term, including summer or winter*	**MECH2110** Mechanical Engineering Design 1 **CORE**	**MECH2360** Dynamics of Machines **CORE**	**MECH3400** Materials Science & Engineering 2 **CORE**
SEMESTER 2	**ENGG2300** Engineering Fluid Mechanics **CORE** *(Replaces MECH2710)*	**ENGG2440** Modelling & Control **CORE**	**ENGG2500** Sustainable Engineering Practice **CORE** *In 2021 changed from Sem 1 to Sem 2*	**MECH2430** Mechanics of Solids 1 **CORE**	**MECH2450** Engineering Computations 2 **CORE**

YEAR 4

SEMESTER 1	**ELECTIVE** *Please see information about electives on the last page* *Electives can be taken in any term, including summer or winter*	**ENGG3500** Managing Engineering Projects **CORE**	**MECH3110** Mechanical Engineering Design 2 **CORE**	**MECH3695** Heat Transfer **CORE**
SEMESTER 2	**MECH4841A** Mechanical Engineering Project A **CORE**	**ENGG4500** Engineering Complexity **CORE**	**MECH3720** Thermodynamics **CORE**	**MECH3780** Fluid Mechanics 2 & CFD **CORE**

YEAR 5

SEMESTER 1	**MECH4410** Mechanics of Solids 2 & FEA **CORE**	**MECH4841B** Mechanical Engineering Project B (20 units) **CORE** *This course must be completed in the semester immediately following MECH4841A*

COMPULSORY REQUIREMENT: EXPOSURE TO PROFESSIONAL PRACTICE (EEP)/INDUSTRIAL EXPERIENCE (IE) 12 WEEKS

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BACHELOR OF MECHANICAL ENGINEERING (HONOURS)

2021 PROGRAM PLAN FOR STUDENTS WHO COMPLETED YEAR 1, 2 AND 3

YEAR 1	SEMESTER 2	**CIVL1100** Fundamentals of Engineering Mechanics **CORE**	**MATH1110 *** Maths for Engineering, Science & Technology 1 **CORE** *(**Replaces** option of MATH1110 **OR** MATH1210)*	**MECH1110** Introduction to Mechanical Engineering Design **CORE** *In 2021 changed from Sem 2 to Sem 1*	**ENGG2100** Engineering Risk & Uncertainty **CORE** ***# From 2021*** *ENGG2100 will count in place of PHYS1210*
YEAR 2	SEMESTER 1	**ELECTIVE** *Please see information about electives on the next page* *Electives can be taken in any term, including summer or winter*	**ENGG1003** Introduction to Procedural Programming **CORE**	**ENGG1500** Introduction to Professional Engineering **CORE**	**MATH1120 *** Maths for Engineering, Science & Technology 2 **CORE** *(**Replaces** option of MATH1120 **OR** MATH1220)*
	SEMESTER 2	**ELEC1310** Introduction to Electrical Engineering **CORE**	**MATH2310** Calculus of Science & Engineering **CORE**	**MECH1750** Engineering Materials 1 **CORE** *(Replaces MECH2250)*	**ELECTIVE** *Please see information about electives on the next page* *Electives can be taken in any term, including summer or winter*
YEAR 3	SEMESTER 1	**ENGG2500** Sustainable Engineering Practice **CORE** *In 2021 changed from Sem 1 to Sem 2*	**MECH2110** Mechanical Engineering Design 1 **CORE**	**MECH2360** Dynamics of Machines **CORE**	**MECH3400** Materials Science & Engineering 2 **CORE**
	SEMESTER 2	**ENGG2300** Engineering Fluid Mechanics **CORE** *(Replaces MECH2710)*	**ENGG2440** Modelling & Control **CORE**	**MECH2430** Mechanics of Solids 1 **CORE**	**MECH2450** Engineering Computations 2 **CORE**
YEAR 4	SEMESTER 1	**ELECTIVE** *Please see information about electives on the next page* *Electives can be taken in any term, including summer or winter*	**ENGG3500** Managing Engineering Projects **CORE**	**MECH3110** Mechanical Engineering Design 2 **CORE**	**MECH3695** Heat Transfer **CORE**
	SEMESTER 2	**MECH4841A** Mechanical Engineering Project A **CORE**	**ENGG4500** Engineering Complexity **CORE**	**MECH3720** Thermodynamics **CORE**	**MECH3780** Fluid Mechanics 2 & CFD **CORE**
YEAR 5	SEMESTER 1	**ELECTIVE** *Please see information about electives on the next page* *Electives can be taken in any term, including summer or winter*	**MECH4410** Mechanics of Solids 2 & FEA **CORE**	**MECH4841B** Mechanical Engineering Project B (20 units) **CORE** *This course must be completed in the semester immediately following MECH4841A*	

COMPULSORY REQUIREMENT: EXPOSURE TO PROFESSIONAL PRACTICE (EEP)/INDUSTRIAL EXPERIENCE (IE) 12 WEEKS

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BACHELOR OF MECHANICAL ENGINEERING (HONOURS)

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** – 280 units
  Math courses – 20 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 transition document in the **Program Handbook** for further information.
- **Electives** – 40 units. You may need to study at least 10 units of electives at the **2000 level or higher**, depending on the core courses you have, or will, complete (which includes having received credit). Please add up the amount of 1000 level core courses you have, or will, complete (which includes having received credit); if this totals 80 units, there are no restrictions on the level of electives you study. If it totals 90 units, at least 10 units of electives must be **2000 level or higher**.

  Some suggested electives include:
  - **MECH3130** Mechanics of Bulk Solids and Particulates
  - **MECH4220** Bulk Materials Handling and Transportation
  - **MECH4580** Computer Aided Engineering and Manufacturing *(please see the course handbook for enrolment restrictions)*
  - **RENE3000** Solar and Wind

  Visit the **Program Handbook** and **Course Handbook** to see a list of all available courses from which you may choose electives.
  Please note, if you completed **MATH1002** this counts as 10 units of electives.
- Students must not exceed 120 units at 1000 level in this program.
- **Students must undertake 12 weeks of approved industrial experience**
- The duration of this program is 4 year 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**. Please refer to the **Program Handbook** for specific information on program structure. If you are intending varying from this program plan please seek advice from your **Academic Program Advisor**.