

PROGRAM PLAN

BACHELOR OF MECHATRONICS ENGINEERING (HONOURS)/ BACHELOR OF SCIENCE

Physics major

PROGRAM OPTION:
Physics major

START DATE:
Semester 1 2019 – 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 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

YEAR	SEM	COURSE	COURSE	COURSE	COURSE	SEM	COURSE	COURSE	COURSE	COURSE
YEAR 1	SEM 1	ENGG1003 Introduction to Procedural Programming CORE	ENGG1500 Introduction to Professional Engineering CORE	MATH1110 * Mathematics for Engineering, Science and Technology 1 CORE	PHYS1210 Advanced Physics I CORE	SEM 2	CIVL1100 Fundamentals of Engineering Mechanics CORE	ELEC1310 Introduction to Electrical Engineering CORE	MATH1120 * Mathematics for Engineering, Science and Technology 2 CORE	MECH1110 Mechanical Drawing/CAD & Workshop Practice CORE
	SEM 2	SCIE1001 Professional Scientific Thinking CORE	SCIE1002 Multidisciplinary Labs CORE	ELEC2320 Electrical and Electronic Circuits CORE	MECH2360 Dynamics of Machines CORE	SEM 2	ELEC1710 Digital and Computer Electronics 1 CORE	ENGG2440 Modelling and Control CORE	MATH2310 Calculus of Science & Engineering CORE	PHYS1220 Advanced Physics II MAJOR
YEAR 2	SEM 1	AERO3600 Embedded Control Systems CORE <i>Replaces ENGG3440</i>	ENGG2500 Sustainable Engineering Practice CORE	MECH2110 Mechanical Engineering Design 1 CORE	PHYS2111 Classical Physics 1 MAJOR	SEM 2	ELEC2430 Circuits and Signals CORE	MECH2710 Fluid Mechanics 1 CORE	SCIE2002 Interdisciplinary Challenges CORE	PHYS2211 Modern Physics 1 MAJOR
	SEM 2	PHYS2112 Classical Physics 2 MAJOR	ENGG3500 Managing Engineering Projects CORE	MCHA3400 Embedded Systems Engineering CORE <i>Replaces ELEC3730</i>	MECH3695 Heat Transfer CORE	SEM 2	ENGG4440 Nonlinear Control and Estimation CORE	MCHA3500 Mechatronics Design 1 CORE	DIRECTED MATH3242 or MATH3820 MAJOR	STAT2110 Engineering Statistics CORE
YEAR 3	SEM 1	PHYS3111 Biophysics MAJOR	PHYS3112 Photonics MAJOR	MCHA4000 Mechatronics Design 2 CORE	MECH4841A or ELEC4840A FYP Part A CORE	SEM 2	MECH4841B^A or ELEC4840B^A FYP Part B (20 units) CORE	ENGG4500 Engineering Complexity CORE	PHYS3211 Quantum Information Science MAJOR	
	SEM 2									

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

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To be eligible to graduate make sure you have completed 400 units (10 units = 1 course unless otherwise specified) which meet the following criteria:

- [Core](#) courses – 320 units
 - ^ [MECH4841B/ELEC4840B](#) must be completed in the semester immediately following [MECH4841A/ELEC4840A](#)
- MATH courses – 20 units. Choice of maths courses is based on your assumed knowledge. To find out which MATH courses you should enrol in please see the [Enrolling in Maths information](#). More information in your [Program Handbook](#)
- [Major](#) courses – 80 units
- It is also a requirement that students complete a total of 12 weeks of [industrial experience](#)
- The duration of this program is 5 years full time or part time equivalent
- The maximum time to complete this program is 12 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 [Program Advisor](#).