

Bachelor of Engineering (Honours) (Mechatronics)/Bachelor of Mathematics

Studies in Mathematics & Statistics major

MATH1210 & MATH1220 pathway



Commencing 2017 - 2019



Studying at Callaghan

See the last page for some helpful hints & tips!



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 prior advice from your [Program Advisor](#) to ensure you remain on track.

Semester 1

Semester 2

Year	Semester 1				Semester 2			
Year 1	ENGG1003 Introduction to Procedural Programming	ENGG1500 Introduction to Professional Engineering	MATH1210 * Mathematical Discovery 1	PHYS1210 Advanced Physics 1	CIVL1100 Fundamentals of Engineering Mechanics	ELEC1310 Introduction to Electrical Engineering	MATH1220 * Mathematical Discovery 2	MECH1110 Mechanical Drawing/ CAD and Workshop Practice
Year 2	ELEC2320 Electrical and Electronic Circuits	ENGG2500 Sustainable Engineering Practice	MATH2310 Calculus of Science and Engineering	MECH2360 Dynamics of Machines	ELEC1710 Digital & Computer Electronics 1	ELEC2430 Circuits and Signals	MATH1800 Mathematical Modelling	STAT2010 Fundamentals of Statistics
Year 3	ELECTIVE <i>Please note, you can study this in any term, including summer or winter, and any year</i>	DIRECTED Maths 2000 level	ENGG3500 Managing Engineering Projects	MECH2110 Mechanical Engineering Design 1	ENGG2440 Modelling and Control	MATH2320 Linear Algebra	MECH2710 Fluid Mechanics 1	DIRECTED <i>Please note, you can study this in either semester/year</i>
Year 4	DIRECTED <i>Please note, you can study this in either semester</i>	ENGG3440 Linear Control and Estimation	MCHA3400 Embedded Systems Engineering <i>Replaced ELEC3730</i>	MECH3695 Heat Transfer	ENGG4440 Nonlinear Control and Estimation	MCHA3500 Mechatronics Design 1	DIRECTED <i>Please note, you can study this in either semester/year</i>	ELECTIVE <i>Please note, you can study this in any term, including summer or winter, and any year</i>
Year 5	ELECTIVE <i>Please note, you can study this in any term, including summer or winter, and any year</i>	DIRECTED <i>Please note, you can study this in either semester/year</i>	MCHA4000 Mechatronics Design 2	MECH4841A Mechanical Engineering Project A	MECH4841B Mechanical Engineering Project B (20 units) <i>This course must be taken in the semester immediately following MECH4841A</i>		ENGG4500 Engineering Complexity	ELECTIVE <i>Please note, you can study this in any term, including summer or winter, and any year</i>

Professional Practice: Industrial Experience 12 weeks

Program Plan Key: = Core = Directed = Elective = [Compulsory Program Requirement](#)

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 – 290 units.
- ✓ Compulsory courses – 20 units
 - * MATH courses - 20 units. The Year 1 maths courses you'll undertake is based on your assumed knowledge. To find out which you should enrol in please see the [Enrolling in Maths information](#). More information is in your [Program Handbook](#). By enrolling in MATH1210 and MATH1220, you will skip studying MATH2340, which students undertaking MATH1110 and MATH1120 must study (this omission is reflected in this program plan). Instead of MATH2340 you will study an additional elective, taking the total of electives to 40 units. Please see the separate [program plan](#) for MATH1110 and MATH1120.
- ✓ Directed courses – 50 units, which is comprised of:
 - 10 units of Mathematics directed courses at a 2000 level; and
 - 40 units of Mathematics directed courses
- ✓ Electives – 40 units. Visit the [Course Handbook](#) to see a list of available electives.
- ✓ 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](#).

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 [Program Advisor](#).

**See the
next page
for a list of
directed
courses**

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Directed courses

Subject to change - please refer to the [program handbook](#) for up to date information.

Choose **10 units** from this list of Mathematics
2000 level directed courses

[MATH2330](#) Analysis
[MATH2730](#) Operations Research 1 (*not currently offered*)
[STAT2000](#) Applied Statistics and Research Methods

Choose **40 units** from this list of Mathematics
directed courses

[MATH2600](#) Introduction to Modern Mathematical Computation (*not currently offered*)
[MATH2800](#) Differential Equations
[MATH3120](#) Algebra
[MATH3170](#) Number Theory
[MATH3180](#) Topology
[MATH3205](#) Fourier Analysis (*not currently offered*)
[MATH3210](#) Directed Studies in Mathematics
[MATH3400](#) Research Topics in Mathematics
[MATH3510](#) Combinatorics and Graph Theory (*not currently offered*)
[MATH3700](#) Advanced Differential Equations
[MATH3800](#) Optimisation
[MATH3820](#) Numerical Methods
[MATH3830](#) Operations Research 2 (*not currently offered*)
[MATH3840](#) Optimisation in Business and Industry
[MATH3850](#) Industrial Project (*not currently offered*)
[STAT3010](#) Statistical Inference
[STAT3030](#) Generalised Linear Models
[STAT3040](#) Time Series Analysis
[STAT3100](#) Total Quality Management
[STAT3120](#) Applied Bayesian Methods
[STAT3170](#) Surveys and Experiments
[STAT3990](#) Topics in Statistics

*Of these 40 units, a minimum of 30 units must
be at the 3000 level and must include one of
MATH3120 / 3170 / 3840 / 3850 (3850 is not
currently offered)*

Helpful Hints & Tips

ENROLMENT HELP



Need help? >>
Ask UON >>



How do I use the Web Timetable? >>

RULES

It is important to follow this Program Plan.

You cannot repeat a course you've passed to try and get a better grade.

You cannot enrol in any extra courses not required by your program >>

INFO FOR NEW STUDENTS



First year undergraduate students usually only enrol in 1000 level courses >>

New Postgraduate students should only enrol in 6000 level courses >>



Find out all you need to know about getting started at uni >>

UNDERSTANDING COURSES & PROGRAMS



Not sure what courses to study? >>



Understanding program and course jargon >>



Understanding UON Jargon >>

PRIOR STUDY



Check you have met the assumed knowledge and requisites for courses before enrolling >>



Have you studied elsewhere or transferred programs? Don't forget to apply for credit >>

CONSIDERING A BREAK?



Need to take a break? This is called a 'leave of absence'. Check if you are eligible >>



Planning on going overseas? Keep electives free, so it's easier for you to receive credit for your overseas studies >>



UON offers a range of support services to assist with your health and wellbeing >>

MORE QUESTIONS?

We are here to answer questions about your program. Talk to us your way!

Ask UON

1300 ASK UON

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