Bachelor of Mathematics
DOUBLE MAJOR- STANDARD PATHWAY

Commencing in 2016  Studying at 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 prior advice from your Program Advisor to ensure you remain on track.

<table>
<thead>
<tr>
<th>Year</th>
<th>Semester 1</th>
<th>Semester 2</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>MATH2310</td>
<td>MATH1800</td>
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<tr>
<td></td>
<td>Calculus of Science and Engineering</td>
<td>Mathematical Modelling</td>
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<td></td>
<td>MAJOR 1 2000 level</td>
<td>STAT1070 Statistics for the Sciences</td>
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<td></td>
<td>MAJOR 2 2000 level</td>
<td>ELECTIVE*</td>
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<tr>
<td></td>
<td>MAJOR 2 Mathematics 1</td>
<td>ELECTIVE</td>
</tr>
<tr>
<td>1</td>
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<tr>
<td>2</td>
<td>MAJOR 1 3000 level</td>
<td>MATH2320 Linear Algebra</td>
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<tr>
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<td>MAJOR 2 3000 level</td>
<td>MAJOR 1 2000 level</td>
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<td></td>
<td>ELECTIVE</td>
<td>MAJOR 2 2000 level</td>
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<tr>
<td></td>
<td>ELECTIVE</td>
<td>MAJOR 2 Mathematics 2</td>
</tr>
<tr>
<td>3</td>
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<tr>
<td>4</td>
<td>MAJOR 1 3000 level</td>
<td>MAJOR 1 3000 level</td>
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Program Plan Key:  

= Core  
= Major 1  
= Major 2  
= Standard Pathway  
= Elective

* Suggested Elective for first semester of study is MATH1510 Discrete Mathematics.
To be eligible to graduate make sure you have completed 240 units (10 units = 1 course unless otherwise specified) which meet the following criteria:

- Core courses - 40 units. 20 units of your Core courses are also counted towards your Major.
- Major - 80 units with 40 units at 3000 level and including all Core, Compulsory and Directed courses.
- Alternate pathway - 30 units. Students who have obtained a Band 5 in NSW HSC Mathematics, or have completed NSW HSC Extension 1, or equivalent should complete the Alternate Pathway. For further information please see Enrolling in Maths. OR
- Standard Pathway - 20 units. Students who have obtained a Band 4 in HSC NSW Extension 1, or have completed NSW HSC Extension 2, or equivalent should complete the Standard Pathway. For further information please see Enrolling in Maths.
- If students don’t meet either Mathematics Pathway knowledge requirements, then they should consult with the Program Convenor to discuss options.
- Electives - 50 units (Alternate Pathway) or 60 units (Standard pathway). Visit the Course Handbook to see a list of available Electives. Students are encouraged to take MATH1510 as their Elective in their first semester of study.
- Students must not exceed 100 units at 1000 level.
- Students must take a minimum of 60 units at 3000 level.
- Single Majors are permitted within this program. Students interested in the Single Major pathway, please see the Bachelor of Mathematics Single Major Program Plans.
- The duration of this program is 3 years full time study (40 units per semester) or part time equivalent.
- The maximum time to complete this program is 8 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.
### Bachelor of Mathematics Major Sequences

A Major is an area of study that you wish to focus on in your program. A course will count towards your Major if it is listed as a compulsory or directed course under the relevant major in the [Program Handbook](#). In each major you must complete 80 units, including 20 units of core courses.

<table>
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<tr>
<th>Majors</th>
<th>Courses (Core and Compulsory Courses listed in ORANGE)</th>
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<th>Courses (Core and Compulsory Courses listed in ORANGE)</th>
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</table>
| **Applied Mathematics** | **Core courses that count towards Major**  
MATH1800 Mathematical Modelling  
STAT1070 Statistics for the Sciences | **Pure Mathematics** | **Core courses that count towards Major**  
MATH2310 Calculus of Science and Engineering  
MATH2320 Linear Algebra |
| **Compulsory Courses**  
MATH2730 Operations Research 1  
MATH2800 Differential Equations | **Compulsory Courses**  
MATH3120 Algebra  
MATH3170 Number Theory  
MATH3840 Optimisation in Business and Industry  
MATH3850 Industrial Project | | **Directed Courses**  
Students must complete 10 units of 2000 level Directed Courses  
Students must complete 40 units of 3000 level Directed Courses, including at least one of the following courses:  
MATH3120 Algebra  
MATH3170 Number Theory  
MATH3840 Optimisation in Business and Industry  
MATH3850 Industrial Project |
| **Directed Courses**  
Students must complete 40 units of 3000 level Directed courses, including at least one of the following courses:  
MATH3840 Optimisation in Business and Industry  
MATH3850 Industrial Project | | |
| **Statistics** | **Core courses that count towards Major**  
MATH1800 Mathematical Modelling  
STAT1070 Statistics for the Sciences | | |
| **Compulsory Courses**  
STAT2000 Applied Statistics and Research Methods  
STAT2010 Fundamentals of Statistics  
STAT3010 Statistical Inference | | |
| **Directed Courses**  
Students must complete 30 units of Directed Courses. | | |
## Helpful Hints & Tips

### Enrolment Help
- Need help? **Ask UON**
- How do I use the Web Timetable? **Ask UON**

### 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? **Ask UON**
- 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
- Visit a Student Hub
- Message us on Facebook
- or Twitter
- UONline via myUON