Overview

The School of Mathematics and Statistics (MathsStats) offers a number of Honours streams including in Applied Mathematics. The Honours year introduces students to the investigative and research aspects of knowledge and consists of advanced lecture courses, an Honours thesis and seminar participation. We offer expert supervision across a wide range of areas in modern mathematics and statistics. Our Honours students are supervised in their Honours project by some of Australia's finest mathematicians.

Students who enrol in the Applied Mathematics Honours Stream are expected to have completed a mathematics major in an undergraduate science or other mathematically focused program. Students who have completed degrees in other cognate disciplines and who are completing a project within the usual concerns of applied mathematics may also apply for entry to this stream.

Honours in Applied Mathematics can be completed full-time or part-time. Most students commence their enrolment in term 1 but entry in term 3 is available subject to resources. Students should check the MathStats Honours webpages for application procedures and enrolment deadlines.

Entry Requirements

So that students have sufficient background to attempt the courses in the honours year, students must discuss their selection of Level III courses with the Applied Mathematics Honours Coordinator or another academic adviser.

To enter honours in applied mathematics, students must have

- Completed the mathematics or physical oceanography stream in the Science or Advanced Science program, including at least 30 units of credit in Level III mathematics or statistics of which at least 18uoc must be in level III applied mathematics, or
- Completed Stage 3 of the applied mathematics stream in the Advanced
Mathematics degree or;
- Completed a suitable mathematics or statistics degree at another university.

In addition, students will normally be required to have:

- An average above 70 in their level III mathematics or statistics courses and
- An average above 70 in level III applied mathematics courses.

The level III applied mathematics courses at UNSW are those courses numbered from MATH3010 to MATH3399 inclusive.

With the permission of the Head of School (or nominee), a student may be allowed into Applied Mathematics Honours without having satisfied the specific departmental requirements, and instead have shown some evidence of the ability to undertake independent study.
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<td>Faculty of Science</td>
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<th><strong>School</strong></th>
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<td>School of Mathematics &amp; Statistics</td>
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<th><strong>Study Level</strong></th>
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<td>Undergraduate</td>
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<th><strong>Minimum Units of Credit</strong></th>
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<th><strong>Specialisation Type</strong></th>
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### Bachelor of Science (Advanced Mathematics) (Honours) - BSc(AdvMath)(Hons) 3956 Advanced Mathematics (Honours)

- **Faculty:** Faculty of Science  
- **Campus:** Kensington  
- **Units of Credit:** 192  
- **Typical Duration:** 4 Years

### Bachelor of Advanced Science (Honours) - BAdvSci(Hons) 3962 Advanced Science (Honours)

- **Faculty:** Faculty of Science  
- **Campus:** Kensington  
- **Units of Credit:** 192  
- **Typical Duration:** 4 Years

### Bachelor of Science (Honours) - BSc(Hons) 4500 Science (Honours)

- **Faculty:** Faculty of Science  
- **Campus:** Kensington  
- **Units of Credit:** 48  
- **Typical Duration:** 1 Years
Specialisation Structure

Students must complete 48 UOC.

Core Courses

Students must complete 30 UOC of the following courses.

Note: Courses must be approved by the Head of School or nominee and taken with the advice of the Honours thesis supervisor.

any level 5 Mathematics course

Thesis Courses

Student must take MATH4001 (6 UOC) three times per year for a total of 18 UOC.

MATH4001  |  6 UOC
Mathematics and Statistics Honours Thesis

Enrolment Disclaimer

Unless advised otherwise by your program authority, you should follow the rules for the handbook for the year you commenced your program. You are also responsible for ensuring you enrol in courses according to your program requirements. myUNSW enrolment checks that you have met enrolment requirements such as pre-requisites for individual courses but not that a course will count towards your program requirements.
Additional Information

The thesis component of applied mathematics honours requires a student to undertake an 18uoc thesis by enrolling in the course MATH4001 (Mathematics and Statistics Honours Thesis) in each of three successive terms. These courses form one thesis/project. Students (full or part-time) can complete the honours thesis in any three consecutive terms of their honours enrolment.

Students will also be required to participate in the weekly honours seminar, which will be timetabled as a joint class in the thesis courses. This seminar is intended to allow students to practise their final honours seminar presentation, listen to presentations of other honours students and engage in other honours training activities. Students should also attend any appropriate seminars in their thesis area.

The thesis will be assessed by at least two academic staff. The supervisor or supervisors of the thesis is expected to submit a report, but will not be a marker for the thesis. Students are required to give a short seminar on their thesis and this will account for 10% of the final mark for the thesis, the remaining 90% coming from the written thesis report.

The 30uoc coursework component of applied mathematics honours will consist of five 6uoc lecture courses at honours/postgraduate level (typically MATH5xxx courses). The suite of courses must be approved by the Head of School or nominee and taken with the advice of the honours thesis supervisor. A student may be permitted to take one or, exceptionally, at most two, courses from outside the School of MathsStats, for example at the AMSI summer school, at another institution or at another UNSW academic unit.

The marks for the thesis and other honours courses will be combined to give a weighted average mark forming a final honours mark which will be rounded up and used to decide the grade of honours the student will be awarded as follows:

- Honours class 1 -- final mark of 85 or over
- Honours class 2, Division 1 -- final mark from 75 to 84
- Honours class 2, Division 2 -- final mark from 65 to 74
- Honours class 3 -- final mark from 50 to 64

Pathways

Students who successfully complete Mathematics or Statistics Honours are qualified to continue further in their research careers by applying to undertake postgraduate studies by PhD or Masters. Students with successful honours are qualified to enrol in
a PhD program at UNSW. Students achieving a high Honours Grade (Class 1 or 2.1) may apply for an Australian Postgraduate Award (APA) PhD scholarship to support such studies. Further information can be obtained from MathsStats postgraduate studies webpages:

http://www.maths.unsw.edu.au/futurestudents/postgraduate-coursework
http://www.maths.unsw.edu.au/futurestudents/postgraduate-research

Graduates of a mathematics or statistics honours plan are also well qualified to find employment in many sectors. Past honours graduates have found employment in areas such as banking, computing, education, finance, government, medical research and meteorology. The Australian Mathematical Society (http://www.austms.org.au/HomePage) and Australian Mathematical Sciences Institute (http://www.amsi.org.au/) maintain up-to-date information on career prospects in mathematics and statistics.
Pre-2019 Handbook Editions

Access past handbook editions (2018 and prior)
© UNSW Sydney (CRICOS Provider No.: 00098G), 2019. The information contained in this Handbook is indicative only. While every effort is made to keep this information up-to-date, the University reserves the right to discontinue or vary arrangements, programs and courses at any time without notice and at its discretion. While the University will try to avoid or minimise any inconvenience, changes may also be made to programs, courses and staff after enrolment. The University may also set limits on the number of students in a course.

Authorised by Deputy Vice-Chancellor (Academic)
CRICOS Provider Code 00098G
ABN: 57 195 873 179