Overview

The major in Advanced Statistics has been designed to ensure that graduates are well trained in three key areas: probability and stochastic processes, statistical inference and modelling, and modern statistical computing methods. Third year electives allow students to further develop their statistical capabilities according to their own interests. Computing has become firmly entrenched in modern Statistics and our courses take full advantage of our excellent computing facilities. This will only enhance the portfolio of skills that students bring to their career.
Faculty
Faculty of Science

School
School of Mathematics & Statistics

Study Level
Undergraduate

Minimum Units of Credit
84

Specialisation Type
Major
Available in Program(s)

Program(s) in which this major is available

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
Specialisation Structure

Students must complete 84 UOC.

Level 1 Core Courses

Students must take 18 UOC of the following courses.

- **MATH1081** | 6 UOC
  Discrete Mathematics

- **MATH1141** | 6 UOC
  Higher Mathematics 1A

- **MATH1241** | 6 UOC
  Higher Mathematics 1B

Level 2 Core Courses

Students must take 30 UOC of the following courses.

- **MATH2111** | 6 UOC
  Higher Several Variable Calculus

- **MATH2601** | 6 UOC
  Higher Linear Algebra

- **MATH2901** | 6 UOC
  Higher Theory of Statistics

- **MATH2931** | 6 UOC
  Higher Linear Models

  One of the following:
  - **MATH2221** | 6 UOC
    Higher Theory and Applications of Differential Equations
**Level 3 Core Courses**

Students must take 24 UOC of the following courses.

- **MATH3821 | 6 UOC**
  Statistical Modelling and Computing

- **MATH3901 | 6 UOC**
  Higher Probability and Stochastic Processes

- **MATH3911 | 6 UOC**
  Higher Statistical Inference

One of the following:
- **MATH3831 | 6 UOC**
  Statistical Methods in Social and Market Research

- **MATH3841 | 6 UOC**
  Statistical Analysis of Dependent Data

- **MATH3851 | 6 UOC**
  Experimental Design and Categorical Data

- **MATH3871 | 6 UOC**
  Bayesian Inference and Computation

**Level 3 Prescribed Electives**

Students must take 6UOC of prescribed electives. These electives must be chosen with the approval of the Head of School or nominee.

- any level 3 Mathematics course

**Level 1 Computer Science Elective**
Students must take at least 6 UOC of the following courses.

*any level 1 Computer Science course*

---

**ENGG1811 | 6 UOC**

*Computing for Engineers*

---

**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

Honours

Students completing a major in Advanced Statistics may be eligible to undertake Honours in Applied Mathematics, Pure Mathematics, or Statistics.

Please consult with staff from the School of Mathematics and Statistics
Pre-2019 Handbook Editions

Access past handbook editions (2018 and prior)

Pre-2019 Handbook Editions
© 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