

Honours Programs in the School of Mathematics and Statistics

An Overview (updated 8/9/23)

1 Introduction

This document provides some introductory information about the honours year in the School of Mathematics and Statistics. An electronic version of this document with live links as well other important information (e.g. scholarships) is available at the School's honours webpage. Detailed information, including courses offered and potential project topics and supervisors, is available in the handbooks for each of the four honours programs offered by the School: [Applied Mathematics](#), [Financial Mathematics & Statistics](#), [Pure Mathematics](#), and [Statistics](#).

The program coordinators for the four areas are currently:

- **Applied Mathematics:** Marek.Rutkowski@sydney.edu.au
- **Financial Mathematics & Statistics:** Marek.Rutkowski@sydney.edu.au
- **Pure Mathematics:** Laurentiu.Paunescu@sydney.edu.au
- **Statistics:** Uri.Keich@sydney.edu.au

Detailed information for the Honours program in [Data Science](#), administered by our School, is available in the Data Science handbook and the program coordinator is

- **Data Science:** Clara.Grazian@sydney.edu.au

2 Pathways to Honours

The Faculty of Science offers two main Honours pathways:

- Combined [Bachelor of Science/Bachelor of Advanced Studies \(Honours\)](#) is an option if you commenced your studies after 2018 and it allows completing Honours as an embedded pathway in the final year of your Bachelor of Science/Bachelor of Advanced Studies program. Notice that this option requires two majors.
- Appended [Bachelor of Science \(Honours\)](#) is a standalone Honours requiring an additional year of study. This option requires only one major. It is for students who
 - are not on track to complete two majors in the Bachelor of Science, or
 - are external students, or
 - commenced before 2018 and did not choose to transfer to the new curriculum version of their degree.

3 Entry requirements

Preliminary entrance into the honours program is through the [Faculty of Science application portal for standalone Bachelor of Science \(Honours\)](#) or, if you are enrolled into combined BSc/BAS program, then you can apply for [Advanced Studies honours \(look under Bachelor of Science/Bachelor of Advanced Studies\)](#) through Sydney Student in your final semester of BSc (go to Course details and apply for Advanced Studies honours). The [Faculty requirements](#) which must be met include:

- qualifying for a degree in a major which is cognate to the proposed honours stream (a major which provides a suitable background for the honours stream; in borderline cases the decision of whether a major is cognate is in the hands of the relevant Honours coordinator and the Faculty);
- having a WAM of at least 65;
- **securing the agreement of a supervisor** (after consulting the relevant handbook).

Please refer to the respective web sites for more details on the Faculty entry requirements to Honours, and remember to fill in the [Expression of Interest form](#), which should be attached to your online application).

In addition, for the Honours programs in Applied Mathematics, Financial Mathematics & Statistics, Pure Mathematics, and Statistics (but not for the program in Data Science), the School of Mathematics and Statistics requires that the student has a total of at least 18CP or 24CP (depending on their major requirement) of relevant 3XXX unit of studies in which

- the average mark of Advanced level courses is at least 65;
- the average mark of Mainstream level courses is at least 75.

If you have a mix of advanced and mainstream courses, where some are above and some below the thresholds, if you are not sure which of your courses are relevant, or if your average is just on the wrong side of the threshold you can seek further advice from the relevant program's honours coordinator.

3.1 It's important to note that:

- All acceptances into Honours (including in cases where the School's requirements are not met) are ultimately at the discretion of the School. However, a student meeting all of the above criteria (or the equivalent from another institution) should be confident of acceptance.
- **When to apply:** For combined BSc/BAS Honours, applications open 31 August to 31 January for commencing Semester 1, and 31 March to 30 June for commencing Semester 2.

The application deadlines for Bachelor of Science Honours are 15 January 2024 for commencing Semester 1, and 25 June 2024 for commencing Semester 2.

4 Structure of Honours

An honours year in Mathematics and Statistics involves four 6CP courses (worth 50% of the final mark) and a project (worth 50%).

4.1 The honours project (50%)

The honours project centres around an essay/thesis consisting of 50-60 pages¹ written on a particular topic from your chosen area. It need not contain original research (although it might) but it should clearly demonstrate that you have understood and mastered the material. The assessment of the honours thesis is based on the mathematical / statistical / scientific content and its exposition, including the written English.

As part of the project you will make a short (20-25 minutes) presentation on your project to staff members and fellow students.

4.2 Course work (50%)

With the exception of pure math all our honours programs have 1-2 core units which the enrolled students must take. In addition, all our honours programs have a list of available courses divided into categories with some restriction about how many courses can/must be taken from each category. Please refer to the relevant handbooks for details.

5 AMSI courses

Students are welcomed to check the courses offered in January at the [AMSI Summer School](#) and also courses available via the [Advanced Collaborative Environment \(ACE\)](#). These courses can possibly be taken for credit (by enrolling in the unit AMSI4001), but this can only be done in consultation the student's supervisor and with the approvals of the specific honours coordinator as well as the School's Honours coordinator, Prof. Laurentiu Paunescu.

6 Prizes and Awards

University Medal: Awarded to honours students who perform outstandingly. The award is subject to Faculty rules, which requires an honours mark over 90 and a SCIAM of 80 or higher. More than one medal may be awarded in any year in a particular area.

Joye Prize in Mathematics: Value: **\$6000, with medal and shield**
Awarded to the most outstanding student completing Honours in one of the four programs offered by the School of Mathematics and Statistics.

There is a range of additional prizes awarded to honours students for proficiency, an outstanding thesis or the best seminar presentation in Applied Mathematics, Financial Mathematics & Statistics, Pure Mathematics, Statistics, and Data Science. See the Handbooks for details of the various prizes.

You are also invited to look at the faculty-level [scholarships](#) and potential students from other states should be particularly aware of the [Honours Relocation Scholarship](#).

¹This range is only indicative and should not be construed as binding.