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# HONOURS INFORMATION BOOKLET

## *Mathematics & Statistics*

FOR NEW HONOURS STUDENTS  
2013

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This booklet should be read in conjunction with the *Honours Policy* (<http://goto.murdoch.edu.au/Honours>) and the information provided by the *Office of Student Life & Learning* (<http://goto.murdoch.edu.au/StudentServices>). The general information in those documents is not repeated here.

Mathematics & Statistics  
School of Engineering & Information Technology



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# 1 Welcome

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Honours in Mathematics & Statistics is a flexible one-year (or part-time equivalent) program consisting of coursework as well as a research project. Each Honours student will carry out a project (worth 12 credit points) – which includes writing a thesis – under the supervision of one or more staff members in Mathematics & Statistics. In addition, Honours students will undertake three units, each worth 4 credit points.

Being an Honours student is quite different from being an undergraduate. Honours students will begin to develop research skills and take on more responsibility for managing their studies and independent learning.

For students intending to join the workforce, completing an Honours degree greatly increases your employability, your starting and continuing salaries, and job mobility. Recent honours graduates of ours are working for the Defence Sciences and Technology Organisation (DSTO), Bureau of Meteorology, Australian Bureau of Statistics, consultancy firms, banks, health departments, secondary schools/colleges, universities, and a range of other employers. Our Honours program is also an attractive option for potential mathematics teachers, who may choose to complete a Graduate Diploma of Education which, together with their mathematical science training at Honours level, is an excellent pathway to a successful career in education.

For students who wish to continue on to do research in any area of mathematics and statistics, an Honours degree is particularly important as Honours is usually a prerequisite for admittance into a PhD program.

As well as broadening your career prospects, Honours will allow you to study recent advances in mathematics, at levels only touched upon during your undergraduate studies. You will learn mathematical techniques for the new millennium, and hence the start of the pathways into modern mathematics and statistics and their applications.

We hope that the coming year proves to be a stimulating and positive experience for you. If you have any queries regarding Honours you should, in the first instance, talk with your supervisor(s) and then with the Chair of the Mathematics & Statistics Honours Sub-Committee.

Good luck!

## 2 Structure of Honours

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### 2.1 Honours Program of Study

Each Honours student has an individual and distinctive Honours project and program of study, which must be approved by the School Dean following recommendation by the Maths & Stats Honours Sub-Committee by the **end of the third week of the first semester** of the student's Honours enrolment.

The **Honours Program of Study** form can be downloaded from the website of the *Office of Student Life and Learning* at <http://goto.murdoch.edu.au/StudentForms>. This form includes the thesis topic area, supervisor(s), details of any coursework (including credit points value), enrolment option, and method(s) of assessment.

Further information, including a general guide to Honours Studies, can be found here: <http://goto.murdoch.edu.au/HonoursStudiesGuide>.

## 2.2 Honours Project

### 2.2.1 Possible Types of Projects

- Critical review of a topic.
- Analysis of data, problem or application using existing techniques.
- Survey of results from the literature.
- Extensions or generalisations of existing work.

### 2.2.2 Thesis

Naturally your Honours thesis will be a large document and you need to be working on it continually throughout the year, starting as early as possible.

The length of your thesis should normally be 40–80 pages using one of the L<sup>A</sup>T<sub>E</sub>X templates available at [http://dl.dropbox.com/u/2261049/Thesis\\_Files.zip](http://dl.dropbox.com/u/2261049/Thesis_Files.zip).

The thesis should contain the following:

- A title page, giving the title of the thesis in full, student's name, supervisor's name, a statement of the form "*A thesis submitted for the degree of Honours in Mathematics & Statistics at Murdoch University*", and the year of submission.
- A signed declaration that the thesis is the student's own account of his/her research.
- An abstract of approximately 300 words.
- Acknowledgements of any help given or work carried out by another person or organisation.
- A table of contents.
- Main text.
- Appendices (if any).
- Bibliography.

The formatting of your thesis also needs to be in accordance with the Thesis Format Requirements published in the *Murdoch University Honours Policy* at <http://goto.murdoch.edu.au/Honours>. In particular, final copies of Honours theses must be typed in minimum 1.5 spacing on good quality acid-free white bond paper, and submitted in hard copy. The paper should be of international standard A4 size (30 cm x 21 cm). A margin of 4.5 cm must be provided on the bound side of the sheet. Other margins should be not less than 2 cm.

Note that for examination purposes spiral binding of your thesis is acceptable. Three hard copies and a PDF version should be submitted to the School Academic Support Officer by the due date.

Following thesis examination, corrections to your thesis may be required. As soon as any such changes have been made, a hard copy of your thesis with appropriate binding, as well as an electronic copy in PDF, must be submitted to the Library. Note, in particular, the requirement to use acid-free paper for the final library copy (this is not required for the version of the thesis submitted for examination). **The School will provide funding for the printing and binding of the thesis.**

Examples of Honours theses are available in the Library or from your supervisor(s). Treat them as a guide only.

### 2.2.3 Thesis Due Date

The thesis is due on the **last day of Week 14** in the second semester of your enrolment (or the fourth semester of your enrolment if you are doing Honours on a part-time basis).

## 2.3 Coursework

Each students must undertake three units, each worth 4 credit points, during their Honours program. At most one of these units may be at 300-level, but the others must be at 400-level.

## 3 Assessment

Your Honours mark will be a single mark out of 100 based upon coursework marks (worth 50%) and your thesis mark (worth 50%).

Two examiners will read and assess your thesis, independently of your principal supervisor. You should consult with your supervisor(s) to determine who will examine your thesis.

The final mark you achieve for Honours will fall into one of five categories as detailed below. Note that, in recommending an overall class of Honours, the Honours Sub-Committee takes into account the examiners' reports on the thesis and the grades obtained in coursework. However, the class of Honours is not simply the sum of marks obtained for each piece of work; it also represents the Sub-Committee's overall judgement of the quality of the student's assessed work during Honours.

<b>First Class</b>	indicates an outstanding level of achievement in both coursework and research	80–100%
<b>Second Class Division A</b>	indicates a high level of achievement overall and evidence of considerable research ability	70–79%
<b>Second Class Division B</b>	indicates a good overall performance in coursework and research	55–69%
<b>Third Class</b>	indicates a satisfactory overall effort but serious inadequacies in one or both areas	45–54%
<b>Fail</b>	indicates unsatisfactory performance with serious inadequacies in both areas	0–44%

## 4 Miscellaneous Information

### 4.1 Office Space & After-Hours Access

Each Honours student is allocated their own desk in a shared office (SC 3.003) in the Science & Computing building and additional privileges, including access to the staff common room (SC 2.034), the Maths & Stats resources room (SC 3.009), and computing facilities.

Do not assume that you will automatically have after-hours access to your office. University policy on after-hours access to offices and buildings is quite explicit and has been formulated to adhere to State and National Occupational Health and Safety legislation. You may need to apply for after-hours access to the Science & Computing building by completing an electronic access form available at <http://www.murdoch.edu.au/ofm/services/keyscyld.html>.

## 4.2 Library Resources

A guide to library resources for Mathematics and Statistics is available at the following URL:  
<http://libguides.murdoch.edu.au/mathsandstats>.

## 4.3 Technical Support

There will most likely come a time when you will require assistance from technical staff. Mr Will Stirling [[W.Stirling@murdoch.edu.au](mailto:W.Stirling@murdoch.edu.au); PS 2.021] is available to provide technical support for computer related issues that cannot be fixed by IT Services [[ITservicedesk@murdoch.edu.au](mailto:ITservicedesk@murdoch.edu.au); (+618) 9360-2000]. In any case, please contact the IT Service Desk to resolve IT issues in the first instance.

## 4.4 Writing Skills Workshops

A series of writing workshops for Honours and Postgraduate students is currently run through the *Office of Student Life and Learning* throughout the year. Participating in these workshops should help you immeasurably with planning and writing your thesis. Details on all workshops offered to Honours students can be found at the following website:

<http://our.murdoch.edu.au/Student-life/Study-successfully/Workshops/Postgrad-workshops/CWandHons/>

We highly recommend that you attend the seminar series on *Honours Thesis Writing*.

## 4.5 Mathematics & Statistics Seminar Series

Every so often, local and visiting academics give talks as part of the *Maths & Stats Seminar Series*, organised by [Dr Amy Glen](mailto:A.Glen@murdoch.edu.au) ([A.Glen@murdoch.edu.au](mailto:A.Glen@murdoch.edu.au)). As these seminars will provide an insight into a broad range of mathematical and statistical endeavours, we strongly encourage Honours students to attend. The seminars will probably also give you some pointers as to how (or how not) to present your own work to a general maths audience. Please contact Amy if you would like to be added to the email list for seminar announcements.

## 5 Contacts

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### Academic Chair, Maths & Stats

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