



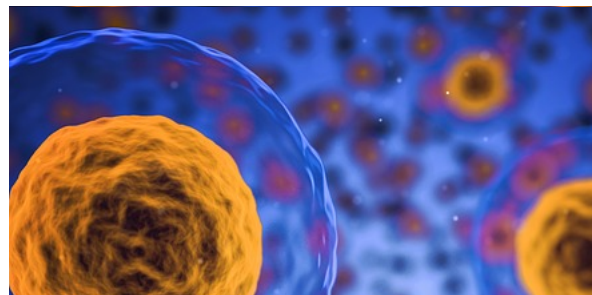
THE UNIVERSITY
of ADELAIDE



HONOURS IN MOLECULAR AND BIOMEDICAL SCIENCE

Faculty of Sciences | School of Biological Sciences
Department of Molecular and Biomedical Science

HONOURS IN MOLECULAR AND BIOMEDICAL SCIENCE



Honours Coordinators

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Overview

Honours in Molecular and Biomedical Science will consist of a research project in the general discipline areas of biochemistry, genetics, microbiology, or immunology and theoretical work appropriate to these disciplines.

The aim of the course is to help students become self-sufficient in designing experiments, to review and understand the literature relevant to their chosen discipline, and to improve their written and verbal communication skills.

The marks allotted to various forms of assessment throughout the course have been distributed with this in mind.

Students who complete the honours tasks with reasonable success can expect to be familiar with a number of areas from within the disciplines of biochemistry, genetics, microbiology and immunology.

They should possess expertise in a number of methods and experimental techniques and be familiar with the principles concerned with the design and interpretation of experiments.

Students will be assessed according to these aims, irrespective of the field chosen for detailed study or the form of teaching offered within each area.

Performance in the research project will necessarily contribute significantly toward the final assessment. However, students will not be penalised if a difficult project does not "succeed".

Assessment will be based on how the student defines the problem, designs and carries out relevant experiments and interprets the results.

The first few weeks should be spent getting the research project under way, both in reviewing the background and specific aims of the project, and also in becoming familiar with laboratory techniques and principles of experimental design. It is strongly recommended that students plan their time to ensure that work on the project can have absolute priority for periods of several consecutive weeks, as this is usually essential for satisfactory progress. (Prior to any of the formal presentations, preparation will obviously have priority).

Efficient time management is essential for success in honours. The course is very demanding of time and it is common for students to underestimate the time required to complete the assigned tasks, whether they be the theory aspect of the course or laboratory work and completion of the thesis.

Students are encouraged to seek guidance from their supervisors with respect to time management.

Students should wherever possible base their study within the Department and take part in Departmental activities, such as research reports, seminars, morning and afternoon tea/coffee breaks. This applies particularly to students physically located

outside of the Molecular Life Sciences Building. In addition, it is expected that students will become actively involved in the research meetings of their laboratory.

Provisional Timetable

Dates are listed as a guide, are provisional and may be subject to change.

Week 1 Monday February 4	B.Sc. (Hons.) course starts. General honours induction 10am – 12pm, MLS 5.01 WHS and related training 2pm – 4pm, MLS 5.01
Week 1 Tuesday February 5	Library induction - Endnote and database training, 10am – 12pm, Nexus 10, 220 Computer Suite 1, Professions Bldg. Run by Ainsley Painter, Science librarian.
March 15	Written literature review, project aims and approach to be submitted (4pm).
March 18-22	Oral presentation of literature review, project aims and approach. 15 minutes for talk + 5 mins for questions.
March/April	Journal Club papers to be distributed one week prior to each journal club (x2). Journal clubs will be held Friday afternoons. Depending on the numbers, students will be assigned to one of the two alternative journal clubs.
Friday May 17	Submit preliminary Research Proposal (4 pm)
Friday June 7	Submit written Research Proposal (4pm)
Week of June 17	Research Proposal presentations. 20-minute presentation, followed immediately by 30 minute Q&A.
Fri 25 October	Honours Research Project thesis to be submitted by 4pm.
Week starting November 4	Final seminar (20 minutes) + viva/interview (30 minutes Q&A).

Honours Activities

Theory Course

The different components of the theory part of the course run from early March through until the end of June.

The oral presentation of your literature review, aims and approach should consist of approximately 75% literature review and background, and 25% aims, justification and approach of the project.

The aim of this is to assist the student to plan and focus the project, and to allow all members of staff an opportunity to provide guidance or assistance; it is not assessed, and gives the students an opportunity to gain practice at oral presentation.

The written literature review document (maximum of 10 pages, i.e. approx. 3,500 words, excluding references) is not assessed as such, but will form the basis of the introduction to the student's thesis and will allow feedback on writing style and presentation.

Journal clubs

Journal clubs (two in total) will each feature a journal article picked by the staff member(s) running that particular journal club session.

In general, you will have seven days in which to read, understand and analyse the paper.

There is no written component for the journal club - you are only required to attend the two Friday journal club sessions and be prepared to discuss the paper.

Each student in each journal club will be asked to present part of the research paper, so that we can fairly assess each student's oral participation. A typical question is to discuss the data shown in a particular figure.

Given that the staff will only assign each student a particular question at the start of each journal club, you need to come prepared to discuss the entire paper. You should feel free (and we encourage you) to get together with the other honours students prior to the journal club to discuss the paper.

Given the size of the honours cohort, on each of the Friday afternoons there will be two concurrent journal club sessions, run by different staff. You will be assigned to a specific journal club session.

Discipline and School Seminars

Weekly departmental seminars (usually starting in March) are held at lunchtime in the Seminar Room on Level 5 (Room 5.01).

They are given by members of the Department or invited external speakers.

There is also a regular program of School Seminars covering a range of topics and given usually by distinguished external speakers. Special seminars are also held from time to time.

All honours students are expected to attend the seminars in the above programs.

Students are also encouraged to attend seminars offered by the other Departments that are related to their work.

Research Proposal

For the Research Proposal, you are expected to come up with an original, testable proposition.

The only prohibition on topics for the grant proposal is a topic closely related to your honours field of research, or areas of research

covered by your supervisor. Further instructions regarding this will be provided prior to the task.

You will be handed a kit describing research proposal preparation and be given 5 weeks to prepare a preliminary research proposal and the final research proposal document. A key part of the exercise is for you to gain knowledge of a range of experimental techniques – how they are performed, the technical ease or difficulty of the methods, and most importantly, the kind and the quality of the data these particular experiments generate.

The final research proposal written proposal will be marked by 2 members of the department's academic or research staff.

Approximately one week after submission of the written document, you will give an oral presentation of your proposal to the Department, which should be no more than twenty minutes in length.

Immediately following the presentation, you will have a more detailed discussion (30 minutes) of your proposal with members of the academic staff, led by your proposal readers.



Honours Research Project and Thesis

Each student will carry out their own individual research project. At the end of the year each project is written up as a thesis using a form similar to that required for publication of research data.

Students should expect significant help from their supervisor in all aspects of scientific research including experimental design, interpretation of results, literature assessment, scientific writing, and career advice.

However, the final draft of the thesis should be the student's own work, for which the student takes responsibility.

Students are advised to look at a representative set of theses from past honours students to help them understand that style of thesis writing, but should be aware that the guidelines for thesis preparation may have changed from past years.

Thesis specifications will be distributed later in the year.

An electronic version of the thesis is required for submission by 4pm on the 25th of October.

As students will be penalised for handing up late, it is essential that you plan backwards from this date to allow enough time for preparing several drafts of your thesis, checking, proof-reading and assembling the thesis.

The thesis will be examined by three readers, drawn from the academic/research staff, with one of the readers being the supervisor.

Approximately one week after submission of their theses, students will be asked to give a verbal report of their work as a seminar (20 min) to members of the Department, followed by a viva/interview (30 min) with members of the academic staff.

Honours Assessment

General

Performance in all parts of the course will be assessed. A poor performance in one component cannot easily be overcome and students should ensure that they balance their efforts in the project and theoretical work.

Performance in various aspects related to the Project will contribute 75% toward the final overall result.

Assessment of the project will rely not only on the success or otherwise of achieving the aims of the project, but on performance throughout the year in terms of approach and application to the project, the written presentations and oral examinations

Attention is drawn to the defined penalties that will be imposed for late submission of the thesis. Few students could hope to achieve First Class Honours having submitted 2-3 days late.

Late submission of theses

As a guide, late submissions will attract the following penalties:

1 day:	1 mark deducted from total mark for the 'project' component of the course.
2 days:	3 marks deducted
3 days:	marks deducted



Honours Grades

The weightings of the various components within these courses are shown below.

6 units (25% of course)	Advanced 4040 (Hons)	Project presentation Literature review Journal Clubs Research proposal	not assessed not assessed 20% 80% (10%+70%)
18 units (75% of course)	Honours 4050 Project	Research project thesis Final seminar Viva	60% 20% 20%

Notes:

1. 4040 and 4050 are the course codes in which you are enrolled.
2. Percentages listed show the contribution of each task to that particular course.
3. Both 'Advanced 4040 (Hons)' and 'Honours 4040 Project' will have results determined using Mark Scheme 10 (the familiar HD, D, C, P etc.). These results will appear on the academic transcript of each student.
4. 'Advanced 4010 (Hons)' contributes 25% (6 of 24 units) and 'Honours 4020 Project' contributes 75% (18 of 24 units) to the total honours grade (using Grading Scheme 5). This result will also appear on the academic transcript of each student.

The following honours grades apply to the final aggregate score across the 24 units.

First	≥ 80
IIA	70 - 79
IIB	60 - 69
III	50 - 59
Fail	≤ 50

Information Sessions

You will be given information and/or feedback sessions regularly throughout the course.

These will generally occur just prior to specific tasks with the goal to provide you with the necessary information and instructions to assist you with the tasks.

FAQs – Frequently Asked Questions

How is the honours course set up?

The honours year starts on the first Monday in February. You will be based in a laboratory for the whole honours year, and will become an integral part of that lab environment.

You will have your own research project, but will receive highly supportive practical and intellectual guidance from your lab colleagues and the department as a whole.

At the end of the year, you will present a thesis which outlines your research findings.

In addition, there are some other assessment tasks throughout the year, including a two “journal clubs” (where the class critically analyses a recent research paper with members of staff), and mid-year, a research proposal, where you search the literature to come up with an original, testable hypothesis in any area of interest to you.

How do I apply for honours?

Applications for honours are coordinated by the Faculty of Sciences office. You can express your interest at sciences.adelaide.edu.au/study/honours

Late applications may be accepted, but this can't be guaranteed.

You will be able to put down up to six preferences for labs you would like to be based in. Once the applications are in, and second semester exam results are finalised, the honours coordinators will be in touch.

I've heard that it's hard to get into honours in Molecular and Biomedical Science.

For most years, all you need for entry into honours is a credit average over your second and third year Biochemistry, Genetics, Microbiology and Immunology courses. It ultimately depends on the number of laboratories available in any given year.

Lab X has made me an honours offer already. Do I have to accept the offer now?

No! No formal offers are made until after honours applications close.

Don't feel under any pressure to accept early 'unofficial' offers made by other departments, schools or faculties before the closing date.

How do I know what projects are available?

A list of honours projects offered by the various labs across the school is available at sciences.adelaide.edu.au/study/honours/honours-projects

For further information on the research in the fields of molecular and biomedical science, visit the school website at sciences.adelaide.edu.au/biological-sciences

You are encouraged to contact the lab heads directly to get some more information about the projects which you find interesting.

Do I get to choose which lab I go to?

When you fill out the online application form, you can list up to six preferences for labs across the school. We will do our best to give you your highest preference possible. This will be done according to both your undergraduate marks, and to the number of places available in each lab.

How do I find out more information?

Feel free to contact the Molecular and Biomedical Science Honours Coordinators ([Renato Morona](#), [Murray Whitelaw](#), [Rob Richards](#)) to ask any specific questions.

You can also contact any of the Molecular and Biomedical Science academic staff for more information about their projects.

