

BIOS 4001 SCIENCE, TECHNOLOGY AND ENVIRONMENT HONOURS PROJECT

Credit Points 60

Legacy Code 300412

Coordinator Janice Aldrich-Wright ([https://directory.westernsydney.edu.au/search/name/Janice Aldrich-Wright/](https://directory.westernsydney.edu.au/search/name/Janice%20Aldrich-Wright/))

Description This is a 60 credit point year-long subject taken over two terms (30 credit points in each term). The aim of this subject is to further develop the student's research and problem solving skills. The student is required to implement a research plan, complete a substantive piece of research in a relevant field within Science, Technology and the Environment and to communicate the results of that work to an interested and technically literate audience. Students will present their research as a thesis with a substantial chapter detailing research objectives, methodology and research outcomes. The thesis topic and structure will vary according to the area of interest of the student and the expertise of the supervisor. The project is meant to be a significant undertaking and to incorporate some element of innovation. Throughout this subject regular planned consultations between the student and supervisor(s) will occur and students will be required to attend seminar series or regular research meetings; these may be formal components of other subjects within the Bachelor (Honours) program. Students are expected to work to a schedule devised in consultation with their supervisor. The schedule will include dates set for progress reports and the presentation of draft chapters for review by the supervisor. The subject builds upon the skills developed in the undergraduate program, extending students' competencies in a range of practical techniques and processes of critical thinking. Students who successfully complete the Honours program will have achieved the appropriate background to enable them to pursue further postgraduate research and/or coursework in the sciences or pursue a career in industry or profession.

School Science

Discipline Biological Sciences

Student Contribution Band HECS Band 2 30cp

Check your fees via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Undergraduate Level 4 subject

Restrictions Students must be enrolled in a postgraduate or honours program.

Assumed Knowledge

Successful completion of a Bachelors degree in a science discipline. Normally the student will have achieved a grade point average of greater than 5.0 in Level 2 and 3 subjects.

Learning Outcomes

On successful completion of this subject, students should be able to:

1. conduct a postgraduate research project;
2. demonstrate a capacity for critical and independent thought, self-motivation and initiative;

3. collate and critically evaluate relevant research literature;
4. formulate research questions;
5. prepare a formal research proposal on their project;
6. (where appropriate) obtain Ethics Approval for the project from the Western Sydney University Human Ethics Review Committee or Animal Care and Ethics Committee;
7. demonstrate competencies in appropriate research methodologies;
8. devise and implement experimental protocols relevant to their research objectives;
9. gather, analyse and evaluate experimental or other relevant data;
10. demonstrate oral and written skills appropriate for the presentation of experimental results, including the ability to write a cogent thesis;
11. develop a framework for understanding and implementing good laboratory management strategies and occupational health and safety procedures.

Subject Content

The content is flexible, depending on the nature of the research project, and a plan is developed contractually between the student and supervisor(s) to meet the needs of the particular research topic. This may include the preparation of up to three progress reports, as agreed with the supervisor(s).

In addition to the submission of a thesis, students are also required to complete the following compulsory elements of the Honours program:

- prepare a formal research proposal on the Honours project within the first Session of Honours study, for evaluation by the student's supervisor(s). Note: This requirement may be satisfied separately in the units Research Methodology and Experimental D
- where appropriate, obtain ethics Approval for The Honours Project from The Western Sydney university human ethics Review Committee or Animal care and ethics Committee.