Specialisation

Biotech & Biomolecular Science

BABSAS  |  48 Units of Credit
Overview

Research in BABS spans fundamental to applied sciences, and includes human bacterial pathogens, hepatitis viruses, tissue engineering, cancer, bioinformatics, functional genomics, extremophiles, astrobiology, and more. Research is grouped into four main disciplines:

- Environmental Microbiology
- Systems and Cellular Biology
- Molecular Medicine
- Infectious Disease

The wide array of scientific research conducted in BABS is represented by the active research projects in the School, some of which are suitable for Graduate Diploma students – see [http://www.babs.unsw.edu.au/research-projects](http://www.babs.unsw.edu.au/research-projects).

Students interested in one of these research areas or projects, should apply for this Biotechnology and Biomolecular Science stream.

A Graduate Diploma (Research) project in Biotechnology and Biomolecular Science is completed full-time, and may be completed part-time at the discretion of the Supervisor. Most students commence their enrolment in Term 1 but mid-year entry (Term 3) is available subject to supervisor approval. Students are expected to commence their program week 1 of term.

Stream Structure

Students typically enrol in courses as follows:

- 18 UOC of postgraduate level or undergraduate level 3 courses from the School of Biotechnology and Biomolecular Science. Students may enrol in these courses in any term depending on the scheduling of courses. Students should discuss their course selection with their supervisor. It is strongly recommended that all students enrol in BABS7180 Research Techniques. Postgraduate courses not from the School of Biotechnology and Biomolecular Science may be taken where a student can demonstrate that the course is relevant to their research project and this is approved by the student's supervisor, the course coordinator and the Postgraduate Coordinator;
- 30 UOC of research project, comprised of a combination of the following courses (depending on the amount of coursework completed each semester): BABS5019 Research Project (6 UOC), BABS5029 Research Project (12 UOC), BABS5039 Research Project (18 UOC).
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<tr>
<th><strong>Faculty</strong></th>
<th>Faculty of Science</th>
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<td><strong>School</strong></td>
<td>School of Biotechnology and Biomolecular Sciences</td>
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<td><strong>Study Level</strong></td>
<td>Postgraduate</td>
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<td><strong>Minimum Units of Credit</strong></td>
<td>48</td>
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<td><strong>Specialisation Type</strong></td>
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Available in Program(s)

Program(s) in which this specialisation is available

Graduate Diploma (Research) - GradDip(Research)

5304 Science Grad Dip (Research)

Faculty: Faculty of Science
Campus: Kensington
Units of Credit: 48
Typical Duration: 1 Years
Specialisation Structure

Students must complete 48 UOC.

Research Project

Students must take 30 UOC of the following courses.

Note: Where a student decides to change their research project, they should discuss this with their Supervisor and Postgraduate Coordinator in the relevant School. Changing of research projects will be at the discretion of the School and may not always be possible. Changes to research projects may only occur within a student's first term.

BABS5019  │ 6 UOC
Research Project (6 UOC)

BABS5029  │ 12 UOC
Research Project (12 Units of Credit)

BABS5039  │ 18 UOC
Research Project (18 Units of Credit)

Prescribed Electives

18 UOC of postgraduate level or undergraduate level 3 courses from the School of Biotechnology and Biomolecular Science of their choice with supervisor approval. Students may enrol in these courses in any term depending on the scheduling of courses. Students should discuss their course selection with their supervisor. It is strongly recommended that all students enrol in BABS7180 Research Techniques. Postgraduate courses not from the School of Biotechnology and Biomolecular Science may be taken where a student can demonstrate that the course is relevant to their research project and this is approved by the student's supervisor, the course coordinator and the Postgraduate Coordinator.

BABS7180  │ 6 UOC
Research Techniques

BABS8010  │ 6 UOC
Advanced Topics in Biotechnology and Biomolecular any level 3 course offered by School of Biotechnology and Biomolecular Sciences

MICR9071  |  6 UOC
Marine Microbiology

**Information Rule**

The coursework component of this stream aims to address disciplinary knowledge gaps or to advance knowledge in a given area.

Depending on a student's background and research project, variations to the listed courses may be approved at the discretion of the Postgraduate Coordinator in the relevant School.

**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

The Research Project in Biotechnology and Biomolecular Science has the following assessment items:

- **Literature Review:** A major written assignment of approximately 3,000 words on the topic of the student's project work. The aim is to familiarise students with library usage and to develop a critical approach to assessing published literature in the area relevant to the research project. A second important aim is for the student to develop appropriate writing skills. Supervisors will therefore read and comment on drafts of the literature review. In their assessment, supervisors will be looking for evidence of thorough scrutiny of the relevant literature and appropriate presentation of the material. Although this does not constitute a formal part of the final grade it is necessary for students to demonstrate their literacy skills at an early stage.

- **Final Seminar:** Each student will present a seminar on outcomes of his/her research project towards the end of their project. This component is worth 5% of the final mark. This is a 15-20 minute powerpoint presentation to the School and is assessed by academics in attendance at the seminar.

- **Thesis:** A written manuscript summarising the research and results of the Research Project under the direction of a duly appointed Supervisor. This manuscript is a maximum of 70 pages and is marked by two assigned Examiners (supervisor and one other). This component contributes 75% to the final Grade for the project.

There are other compulsory activities which do not contribute to your grades but are required for the successful completion of the Program in the School of BABS. This includes:

- Occupational Health & Safety training prior to starting research in the laboratory.

Deadlines for the above assessable items and compulsory activities will be advised by the School of Biotechnology and Biomolecular Science.

**Admission Requirements and Process**

**Admission Requirements**

Applicants are required to have a recognised three year full-time Bachelor degree
(AQF Level 7) with a minimum average mark greater than 55, specialising in:

- Molecular Cell Biology;
- Genetics;
- Microbiology; or
- Biotechnology

Students must also demonstrate in their application that they have research experience in one of the relevant disciplines for this stream. Students without demonstrated research experience will be considered at the discretion of the Postgraduate Coordinator in the School of Biotechnology and Biomolecular Sciences.

**Admission Process**

It is essential that applicants identify an appropriate academic supervisor and obtain agreement prior to submitting an application for postgraduate study. Identifying and negotiating with prospective supervisors is up to applicants, and applicants need to align their interest with the research area of one of the School's academics.

Once agreement has been reached with a suitable academic staff member, an application for Postgraduate study through UNSW Apply Online (https://apply.unsw.edu.au) is required. Agreement of a supervisor is not a guarantee of admission but required before an application will be considered. Admission also depends on the resources of the School and supervisor availability, and is ultimately at the discretion of the Head of School or nominee.

**Pathways**

Students who successfully complete the Graduate Diploma (Research) with a sufficiently high weighted average mark are qualified to continue further in their research careers by undertaking postgraduate studies by research (Masters or PhD level).

Graduates are also well qualified to work in various endeavours, which include: patent law specialising in scientific patents, management in technological companies, scientific research and commercial applications, science journalism, forensic science, pollution control, diagnostic microbiology and immunology, and sales and technical specialists in science-based industries.
Pre-2019 Handbook Editions

Access past handbook editions (2018 and prior)
© 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