



UNSW Course Outline

BABS3301 Biomolecular Science Laboratory Project (Advanced) - 2024

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General Course Information

Course Code : BABS3301

Year : 2024

Term : Term 2

Teaching Period : T2

Is a multi-term course? : No

Faculty : Faculty of Science

Academic Unit : School of Biotechnology and Biomolecular Sciences

Delivery Mode : Multimodal

Delivery Format : Standard

Delivery Location : Kensington

Campus : Sydney

Study Level : Undergraduate

Units of Credit : 6

Useful Links

[Handbook Class Timetable](#)

Course Details & Outcomes

Course Description

This course is designed to introduce students to research methodology and to stimulate critical

and lateral thinking in the context of problem-solving. The course involves directed reading, laboratory work and the use of internet resources. Students work on a research project under the supervision of a member of the academic staff who defines the project. The course provides unique opportunities for students to conduct independent laboratory work, experience new technologies, and contribute to solving real-world problems.

Enrolment in this course is by invitation and is based on academic performance. Interested students should contact the course coordinator or the BABS Student Office (BABStudent@unsw.edu.au).

Note: This course is restricted to students who have completed 48 units of credit, have a WAM of 75 or more and are enrolled in a Biotechnology, Bioinformatics, Genetics, Microbiology or Molecular and Cell Biology major in one of the following programs*:

Bachelor of Science

Bachelor of Advanced Science

Bachelor of Medical Science

*including associated dual degree programs.

Course Aims

The aim of the course BABS3301 is to provide a hands-on and real-world introduction into research activities that are relevant for a scientific career in the general field of biomolecular sciences or biotechnology.

Course Learning Outcomes

Course Learning Outcomes
CL01 : Develop scientific enquiry and problem-solving skills such as recognising and defining a problem, formulating hypotheses, designing experiments, collecting data through observation and/or experimentation.
CL02 : Demonstrate a technical and manipulative utilisation of laboratory equipment, tools, materials, and computer software, if relevant, and develop a proper understanding of laboratory procedures, including health and safety, and scientific methods.
CL03 : Demonstrate the ability of effective time management and reflective note keeping.
CL04 : Critically evaluate scientific literature.
CL05 : Apply scientific writing skills to a standard suitable for publication in a peer-reviewed journal.
CL06 : Apply oral communication skills to deliver a clear message to a science audience and develop appropriate supporting material.

Course Learning Outcomes	Assessment Item
CLO1 : Develop scientific enquiry and problem-solving skills such as recognising and defining a problem, formulating hypotheses, designing experiments, collecting data through observation and/or experimentation.	• Performance in the lab
CLO2 : Demonstrate a technical and manipulative utilisation of laboratory equipment, tools, materials, and computer software, if relevant, and develop a proper understanding of laboratory procedures, including health and safety, and scientific methods.	• Performance in the lab
CLO3 : Demonstrate the ability of effective time management and reflective note keeping.	• Reflective Diary • Performance in the lab
CLO4 : Critically evaluate scientific literature.	• Mini Literature Review/Scientific Report
CLO5 : Apply scientific writing skills to a standard suitable for publication in a peer-reviewed journal.	• Mini Literature Review/Scientific Report
CLO6 : Apply oral communication skills to deliver a clear message to a science audience and develop appropriate supporting material.	• Oral Presentation of Research Project

Learning and Teaching Technologies

Microsoft Teams

Additional Course Information

This course is restricted to Science students enrolled in Biotechnology, Biochemistry, Genetics, Molecular Biology, or Microbiology programs. Students must have completed at least 48 UC and have a WAM of 75+ to be eligible. Enrollment is by invitation based on academic performance. Students should contact the course convenor at f.vafae@unsw.edu.au to obtain approval for enrollment.

It is the student's responsibility to find a supervisor before the term begins. To get an overview of active supervisors and available projects, students can consult the BABS Honours booklet [here](#).

This course does not have a Moodle site. All communication will take place via the Teams Channel, to which students will be invited at the beginning of the term.

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Reflective Diary Assessment Format: Individual	10%	Start Date: Not Applicable Due Date: End of Week 11
Mini Literature Review/Scientific Report Assessment Format: Individual	30%	Start Date: Not Applicable Due Date: End of Week 11
Performance in the lab Assessment Format: Individual	30%	Start Date: Not Applicable Due Date: End of Week 11
Oral Presentation of Research Project Assessment Format: Individual	30%	Start Date: Not Applicable Due Date: During Week 9

Assessment Details

Reflective Diary

Assessment Overview

You are required to submit your diary in week 11 based on your reflections of your performance and achievements throughout the project. You will need to email the document to the course coordinator or provide a link to your online resource.

You will be assessed based on your ability to log work activities in a clear, comprehensible and useful manner and include a reflective commentary, where appropriate on the day's activities.

Feedback on your task will be provided within two weeks of the submission.

Course Learning Outcomes

- CLO3 : Demonstrate the ability of effective time management and reflective note keeping.

Detailed Assessment Description

The rubric is provided to students and supervisors via the course-designated MS Teams Channel. Students are added to the Teams Channel at the onset of the term. Additionally, the assessment criteria are communicated during the lab induction in Week 1.

Assignment submission Turnitin type

Not Applicable

Mini Literature Review/Scientific Report

Assessment Overview

This will be due in week 11, and feedback provided two weeks from submission by the course

coordinator.

You will be assessed based on your ability to critically evaluate and use evidence from your own work or from the scientific literature. Your report should reflect your ability to identify strengths and weaknesses of the existing literature, to identify gaps in a field that require more research, and to contextualize findings within your research or literature review.

Formative feedback on draft report will be provided by supervisor during term, as required.

Word limit is 4000 maximum and you will be provided with a recommended format of the report and a detailed rubric.

Course Learning Outcomes

- CLO4 : Critically evaluate scientific literature.
- CLO5 : Apply scientific writing skills to a standard suitable for publication in a peer-reviewed journal.

Detailed Assessment Description

The rubric is provided to students and supervisors via the course-designated MS Teams Channel. Students are added to the Teams Channel at the onset of the term. Additionally, the assessment criteria are communicated during the lab induction in Week 1.

Performance in the lab

Assessment Overview

This is ongoing and students will be required to submit their lab books in week 11. Feedback will be provided to students within 1 week of submission by the project supervisor.

You will be assessed and marked by supervisor based on:

- Technical and manipulative use of laboratory equipment, tools, materials, computer software
- Proper understanding of laboratory procedures, including health & safety, and scientific methods
- Timely, clear and professional upkeep of laboratory workbook
- Efficient time management
- Skills of scientific enquiry and problem-solving, e.g.,
recognising and defining a problem, formulating hypotheses, designing experiments, collecting data, interpreting data, testing hypotheses, drawing conclusions, and communicating processes, outcomes and their implications

Ongoing formative feedback on your lab performance will be provided by your supervisor throughout the term.

Course Learning Outcomes

- CL01 : Develop scientific enquiry and problem-solving skills such as recognising and defining a problem, formulating hypotheses, designing experiments, collecting data through observation and/or experimentation.
- CL02 : Demonstrate a technical and manipulative utilisation of laboratory equipment, tools, materials, and computer software, if relevant, and develop a proper understanding of laboratory procedures, including health and safety, and scientific methods.
- CL03 : Demonstrate the ability of effective time management and reflective note keeping.

Detailed Assessment Description

The rubric is provided to students and supervisors via the course-designated MS Teams Channel. Students are added to the Teams Channel at the onset of the term. Additionally, the assessment criteria are communicated during the lab induction in Week 1.

Oral Presentation of Research Project

Assessment Overview

This assessment will be in week 9. You will be expected to present your research project to your peers and course convenor and supervisors.

The presentation will be assessed based on the:

- Comprehension (i.e., clear and deep understanding of the project during presentation and question time),
- Content and organisation (i.e., clear structure of the presentation; clarity of the content; scientific accuracy; and cited sources and images),
- Delivery (eye contact; pace; time-keeping; flow; confidence; engagement), and
- Visual Aids (i.e., slide design & colours; effective use of pictures, text, and animations)

Formative feedback on draft presentation will be provided by convenor or supervisor during the term, as required.

Formal feedback on the task will also be provided within 1 week of the presentation by the course coordinator and project supervisor.

Course Learning Outcomes

- CL06 : Apply oral communication skills to deliver a clear message to a science audience and develop appropriate supporting material.

Detailed Assessment Description

The rubric is provided to students and supervisors via the course-designated MS Teams Channel. Students are added to the Teams Channel at the onset of the term. Additionally, the

assessment criteria are communicated during the lab induction in Week 1.

General Assessment Information

General assessment information, including examples, rubrics, and links to external resources, will be provided to students through the course-designated Teams Channel and communicated during the course induction in Week 1.

Grading Basis

Standard

Course Schedule

Teaching Week/Module	Activity Type	Content
Week 1 : 27 May - 2 June	Activity	Induction, meeting with the supervisor, commencement of the project
Week 9 : 22 July - 28 July	Presentation	The course convenor will schedule the oral Presentation during Week 9.
Week 11 : 5 August - 11 August	Assessment	Project Report and Reflective Diary is due by the end of Week 11.

Attendance Requirements

Not Applicable - as no class attendance is required

General Schedule Information

Students are expected to spend approximately 14 hours per week on lab work, other assessable tasks, and learning. Whether lab work is conducted in person or remotely depends on the nature of the project and the agreement with the supervisor.

Course Resources

Prescribed Resources

Resources will be provided to students via MS Teams upon the commencement of the term

Course Evaluation and Development

Students are encouraged to provide feedback to the course convenor and their supervisor throughout the term. They are invited to complete the myExperience survey and a customized survey created by the course convenor to address specific questions and gather targeted feedback.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
	Fatemeh Vafaee					No	Yes

Other Useful Information

Academic Information

Upon your enrolment at UNSW, you share responsibility with us for maintaining a safe, harmonious and tolerant University environment.

You are required to:

- Comply with the University's conditions of enrolment.
- Act responsibly, ethically, safely and with integrity.
- Observe standards of equity and respect in dealing with every member of the UNSW community.
- Engage in lawful behaviour.
- Use and care for University resources in a responsible and appropriate manner.
- Maintain the University's reputation and good standing.

For more information, visit the [UNSW Student Code of Conduct Website](#).

Academic Honesty and Plagiarism

Referencing is a way of acknowledging the sources of information that you use to research your assignments. You need to provide a reference whenever you draw on someone else's words, ideas or research. Not referencing other people's work can constitute plagiarism.

Further information about referencing styles can be located at <https://student.unsw.edu.au/referencing>

Academic integrity is fundamental to success at university. Academic integrity can be defined as a commitment to six fundamental values in academic pursuits: honesty, trust, fairness, respect, responsibility and courage. At UNSW, this means that your work must be your own, and others' ideas should be appropriately acknowledged. If you don't follow these rules, plagiarism may be detected in your work.

Further information about academic integrity, plagiarism and the use of AI in assessments can

be located at:

- The [Current Students site](#),
- The [ELISE training site](#), and
- The [Use of AI for assessments](#) site.

The Student Conduct and Integrity Unit provides further resources to assist you to understand your conduct obligations as a student: <https://student.unsw.edu.au/conduct>

Submission of Assessment Tasks

Penalty for Late Submissions

UNSW has a standard late submission penalty of:

- 5% per day,
- for all assessments where a penalty applies,
- capped at five days (120 hours) from the assessment deadline, after which a student cannot submit an assessment, and
- no permitted variation.

Any variations to the above will be explicitly stated in the Course Outline for a given course or assessment task.

Students are expected to manage their time to meet deadlines and to request extensions as early as possible before the deadline.

Special Consideration

If circumstances prevent you from attending/completing an assessment task, you must officially apply for special consideration, usually within 3 days of the sitting date/due date. You can apply by logging onto myUNSW and following the link in the My Student Profile Tab. Medical documentation or other documentation explaining your absence must be submitted with your application. Once your application has been assessed, you will be contacted via your student email address to be advised of the official outcome and any actions that need to be taken from there. For more information about special consideration, please visit: <https://student.unsw.edu.au/special-consideration>

Important note: UNSW has a “fit to sit/submit” rule, which means that if you sit an exam or submit a piece of assessment, you are declaring yourself fit to do so and cannot later apply for Special Consideration. This is to ensure that if you feel unwell or are faced with significant circumstances beyond your control that affect your ability to study, you do not sit an examination

or submit an assessment that does not reflect your best performance. Instead, you should apply for Special Consideration as soon as you realise you are not well enough or are otherwise unable to sit or submit an assessment.

Faculty-specific Information

Additional support for students

- [The Current Students Gateway](#)
- [Student Support](#)
- [Academic Skills and Support](#)
- [Student Wellbeing, Health and Safety](#)
- [Equitable Learning Services](#)
- [UNSW IT Service Centre](#)
- Science EDI Student [Initiatives](#), [Offerings](#) and [Guidelines](#)