BIOM4952

Research Thesis B

Term Three // 2020
Course Overview

Staff Contact Details

Convenors

<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
<th>Availability</th>
<th>Location</th>
<th>Phone</th>
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</thead>
<tbody>
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School Contact Information

Student Services can be contacted via [unsw.to/webforms](http://unsw.to/webforms).
Course Details

Credit Points 4

Summary of the Course

The thesis provides an opportunity for the student to bring together engineering principles learned over their previous years of study and apply these principles to innovatively solve problems such as the development of a specific design, process and/or the investigation of a hypothesis. Thesis projects must be complex, open-ended problems that allow room for student creativity, and the acquisition, analysis and interpretation of results. There must be multiple possible solutions or conclusions at the outset and enough complexity to require a degree of project planning from the student. The thesis requires the student to formulate problems in engineering terms, manage an engineering project and find solutions by applying engineering methods. Students also develop their ability to work in a research and development environment.

Course Aims

The Biomedical Engineering Research Thesis or Masters’ Project aims to analyse or solve biomedical problems by applying engineering techniques. Problems to be addressed relate to basic or applied biomedical research or development of medical devices, processes or software. The Research Thesis is obligatory for all students of the dual (formerly concurrent) Bachelor of Engineering/Master of Biomedical Engineering program, and is undertaken in years 4 and 5 of the degree.

Course Learning Outcomes

1. Develop a design or a process or investigate a hypothesis following industry and professional engineering standards.
2. Critically reflect on a specialist body of knowledge related to their thesis topic.
3. Apply scientific and engineering methods to solve an engineering problem.
4. Analyse data objectively using quantitative and mathematical methods.
5. Demonstrate oral and written communication in professional and lay domains.
6. To solve biomedical problems by applying 1-5.

Teaching Strategies

Learning and teaching activities

The student will rely on developing an independent and collaborative learning approach. Research questions are often open-ended and highly specialised, so the student will learn most by one-to-one mentoring provided by the supervisor and their research team.

You will learn most of your skills from PhDs and Post Docs in your lab. We encourage you to attend lab meetings to get and know lab personnel.

Expectations of students

- Meet your supervisor regularly
- Complete all the assessments on time
Additional Course Information

There is no official class time for this course. You must still ensure your enrolment and registration is up to date in your enrolment. Your face-to-face time needs to be organised with your supervisor, as you are expected to meet them at least once per week.
Assessment

Students in this cohort will complete their thesis over three terms (4+4+4) or over two terms (4+8). A summary of the assessment is as follows:

**Thesis A:** It is intended that Thesis A cover the scoping, planning, and completing preparations for the project.

**Thesis B:** The primary intention behind Thesis B is to ensure students stay on track with their projects and project work as they progress through the year.

**Thesis C:** Thesis C continues the project work. The key deliverable is the Written Report, alongside a poster presentation.

Assessment Tasks

<table>
<thead>
<tr>
<th>Assessment task</th>
<th>Weight</th>
<th>Due Date</th>
<th>Student Learning Outcomes Assessed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Progress Seminar</td>
<td>10%</td>
<td>For 4+4+4: Week 10 of Term. For 4+8, Week 3 of Term</td>
<td>1, 2, 3, 4, 5</td>
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Assessment Details

**Assessment 1: Progress Seminar**

**Start date:** Not Applicable

**Length:** 15 minute seminar, 5 minute questions

**Details:**

The primary intention behind Thesis B is to ensure students stay on track with their projects and project work as they progress through the year.

There is one assessment task for Thesis B.

**TB1: Research Seminar (10%)**

- This seminar will be presented to the supervisor, their research team and an additional academic assessor. It will involve the student detailing the background, motivation for their work, progress completed so far and a critical reflection on their work.
- Students must organize a time with their supervisor and find second assessor.
- Students are responsible for sending out invites to supervisor and assessor.
- It will be presented online via Microsoft Teams.
- For students doing 4+4+4, there is an expectation that the student will have preliminary results by this point, and seminar will be in Week 10.
- For students doing 4+8, the results should be almost finalised by this point, and the seminar will be held in Week 3 of the second term. This gives students the opportunity to revert to 4+4+4 prior to Census Date if their progress is deemed unsatisfactory.
- **Note:** You should discuss with your supervisor early in the second term to identify a suitable time to complete the assessment task.
• Length: 15 minutes Seminar + 5 minutes questions (total time 20 minutes)
Resources

Prescribed Resources

Resources will be made available to help students guide them in their journey for Thesis B.

Extensions

You can apply for special consideration when illness or other circumstances interfere with your assessment performance.

Other applications for extension of submission of thesis reports (e.g. equipment breakdown, etc.):

1. Discuss the possibility of an extension with your supervisor first.
2. Requests can then be lodged by the student here [http://tinyurl.com/yy2jzpyv](http://tinyurl.com/yy2jzpyv). The supervisor will then receive an email asking them to approve, before it is escalated to the decision panel.
3. Request must be lodged by Week 6 of term.
4. Panel decision will be made by end of week 7.
5. The decision will be made by a panel – consisting of the HoS (or their nominee), Thesis Coordinator, and 1 other person.
6. Students should be alerted to the fact that this is not guaranteed, and thus should not rely on getting an extension.
7. Typically, extensions are granted UP TO 3 weeks. The length of the extension needs to be requested and justified by the supervisor. Panel will decide the length of time granted.

Procedure if you fail Thesis A, B or C


Fail in Thesis B (seminar mark – must re-enrol in Thesis B again

Fail in Thesis C – Students have three options.

1. re-enrol for Thesis A, B and C again, new project and supervisor
2. re-enrol for Thesis C again, same project - needs consent of an appropriate supervisor & student
3. Student does further work, re-submits thesis after a max of 6 weeks. Course mark capped at 50%. If still not satisfactory, then needs to re-enrol.

This last option is only available if the original mark was ≥40, OR if the student is in their last semester before graduation (regardless of the original mark).

Fail in Thesis B & C (when taken simultaneously) – Students must re-enrol in Thesis B again, and cannot concurrently enrol in C. They can then take Thesis C when Thesis B has been satisfactorily completed.

Industry based projects
We encourage students to seek partnerships with industry, so students can have a co-supervisor from industry. However, if confidentiality is required, a confidential disclosure agreement (CDA) is obligatory. The agreement will protect the intellectual property rights of the industry partner, UNSW and the student. Students or academics are not authorised to sign confidential disclosure agreements on behalf of UNSW and are advised to talk to the course coordinator and UNSW legal office to arrange for drafting and signing of the confidential disclosure or research agreement.

**Late procedure**

In all cases, applications for late submission can be applied for BEFORE the due date. This is at the discretion of the thesis coordinator but should only be granted in exceptional circumstances. As per normal, students can also apply through myUNSW for special consideration.

For Thesis A, B or C, 5 marks will be deducted off the *thesis* for every day late. Penalty applies until the marks for the *course* decrease to 50, and further lateness does not result in failure of the *course*, but might be a failure of the thesis (weekends count as days).

**Additional support for students**

- The Current Students Gateway: [https://student.unsw.edu.au/](https://student.unsw.edu.au/)
- Academic Skills and Support: [https://student.unsw.edu.au/academic-skills](https://student.unsw.edu.au/academic-skills)
- UNSW IT Service Centre: [https://www.it.unsw.edu.au/students/index.html](https://www.it.unsw.edu.au/students/index.html)

**Recommended Resources**

Not available

**Course Evaluation and Development**
Submission of Assessment Tasks

Laboratory reports and major assignments will require a Non Plagiarism Declaration Cover Sheet.

Late submissions will be penalised 10% of the mark for each calendar day late. If you foresee a problem in meeting the nominated submission date please contact the Course Convenor to make an appointment to discuss your situation as soon as possible.
Academic Honesty and Plagiarism

PLAGIARISM
Beware! An assignment that includes plagiarised material will receive a 0% Fail, and students who plagiarise may fail the course. Students who plagiarise will have their names entered on a plagiarism register and will be liable to disciplinary action, including exclusion from enrolment.

It is expected that all students must at all times submit their own work for assessment. Submitting the work or ideas of someone else without clearly acknowledging the source of borrowed material or ideas is plagiarism.

All assessments which you hand in must have a Non Plagiarism Declaration Cover Sheet. This is for both individual and group work. Attach it to your assignment before submitting it to the Course Coordinator or at the School Office.

Plagiarism is the use of another person’s work or ideas as if they were your own. When it is necessary or desirable to use other people’s material you should adequately acknowledge whose words or ideas they are and where you found them (giving the complete reference details, including page number(s)). The Learning Centre provides further information on what constitutes Plagiarism at:
https://student.unsw.edu.au/plagiarism
Academic Information

COURSE EVALUATION AND DEVELOPMENT
Student feedback has helped to shape and develop this course, including feedback obtained from on-line evaluations as part of UNSW’s myExperience process. You are highly encouraged to complete such an on-line evaluation toward the end of Term. Feedback and suggestions provided will be important in improving the course for future students.

DATES TO NOTE
Refer to MyUNSW for Important Dates, available at:
https://my.unsw.edu.au/student/resources/KeyDates.html

ACADEMIC ADVICE
For information about:
• Notes on assessments and plagiarism,
• Special Considerations,
• School Student Ethics Officer, and
• BESS

refer to the School website available at
http://www.engineering.unsw.edu.au/biomedical-engineering/

Supplementary Examinations:
Supplementary Examinations for Term 3 2020 will be held on Monday 11th January – Friday 15th January (inclusive) should you be required to sit one.

Image Credit
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CRICOS
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Acknowledgement of Country
We acknowledge the Bedegal people who are the traditional custodians of the lands on which UNSW Kensington campus is located.