BIOM4953

Research Thesis C

Term 2, 2022

Course Overview

Staff Contact Details

Convenors

Name	Email	Availability	Location	Phone
Michael Stevens	thesis.biomedeng@unsw.edu.au	By Appointment		

School Contact Information

Student Services can be contacted via unsw.to/webforms.

Course Details

Units of Credit 4

Summary of the Course

The thesis provides an opportunity for you to bring together engineering principles learned over your 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 are complex, open-ended problems that allow room for your creativity, and the acquisition, analysis and interpretation of results. There are multiple possible solutions or conclusions at the outset and sufficient complexity to require a degree of project planning. The thesis requires you to formulate problems in scientific or engineering terms, manage an technical project and find solutions by applying scientific and engineering methods. You will also develop your ability to work in a research and development environment. You must identify a supervisor and project prior to enrolling in this course.

Course Aims

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 sufficient 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 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 CLOs 1-5

Teaching Strategies

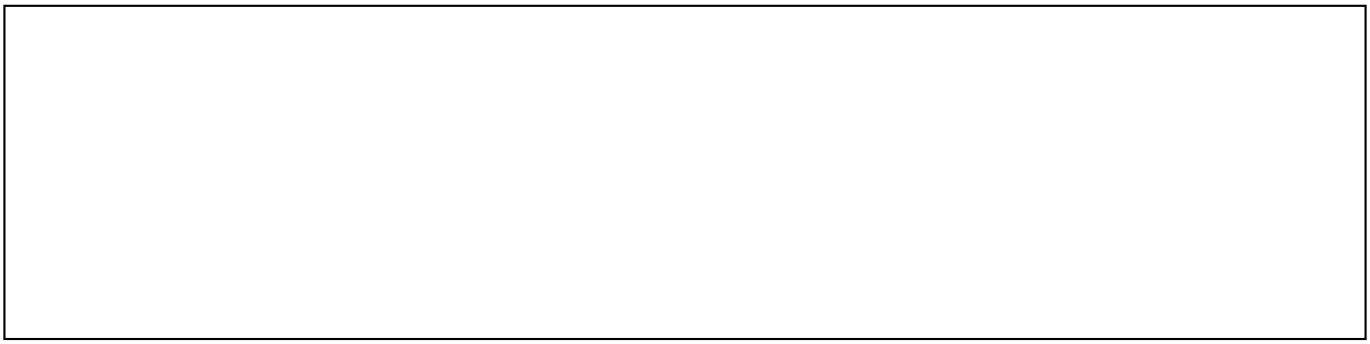
The course is taught as an individual research project, to develop a level of research skills and autonomy.

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. Students must have completed this assessment and passed in order to enroll in BIOM4953. This course is worth 10% of your final thesis grade.
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. This subject is worth 10% of your final thesis grade. Students must have completed this assessment and passed in order to enroll in BIOM4953. This course is worth 10% of your final thesis grade.
Thesis C: Thesis C continues the project work. The key deliverable is the Written Report, alongside a poster presentation. This subject is worth 80% of your final thesis grade

Upon completion of Thesis C, the final grade will be calculated and reapplied to this course and then to BIOM4951 and BIOM4952, replacing any E.C. components.



explain your research to engineers who are not necessarily in your field of study.
6. Depending on the social distancing restrictions, this assessment will either take place online or as a poster session.

This is not a Turnitin assignment

Additional details

Note that the poster is due in WEEK 8.

Assessment 2: Thesis Report

Due date: Monday Week 11 11:59pm

The aim of Thesis C is to finalise your research results and disseminate them in both an oral and written manner. This is the final key part of being a successful researcher. To that end, the assessment tasks provide students with a realistic experience of being a researcher.

There are 3 assessment tasks for Thesis C.

Report

The written report is the final documentation of your thesis project. It should be approximately 50 pages in length (excluding references and appendices).

The thesis content will be assessed according to the stated thesis aims which may be a) experimental or simulation-based b) design or c) critical reviews. The assessment weightings are shown below. Please note that these are only assessment criteria. The thesis structure outline is entirely up to you.

The mark break down for this report is as follows

1. Literature review/background and putting the results in context (20%)
2. Execution of the research project, quality of analysis, discussion of results (50%)
3. Conclusions and value added (20%)
4. Document presentation (10%)

Assessment 3: Participation

Assessment length: Online Survey
Due date: After submission of final thesis report.

Participation

    1. Attendance at lab meetings
4. Diligence and competence in performing the task
    1. Amount of work and engagement with problem
    2. Risk assessments complete (when relevant)
    3. Other project-specific evidence (e.g. lab book completion)

Attendance Requirements

Students are strongly encouraged to attend all classes and review lecture recordings.

Course Schedule

No lectures in this course.

View class timetable

Timetable

Date	Type	Content
Week 8: 18 July - 22 July	Assessment	Poster Presentation on Friday of Week 8
Study Week: 8 August - 11 August	Assessment	Final Report Due Monday Week 11 , 11:59pm
	Assessment	Submit your project exit form.

Resources

Prescribed Resources

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

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. 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.
8.

Procedure if you fail Thesis A, B or C

Fail in Thesis A (interim report mark < 50%) – must re-enrol in Thesis A again.

Fail in Thesis B (seminar mark < 50%) – 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. *Amspqc* 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

Submission of Assessment Tasks

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

Assignments should be submitted on time. A daily penalty of 5% of the marks available for that assignment will apply for work received after the due date. Any assignment more than 5 days late will not be accepted. The only exemption will be when prior permission for late submission has been granted by the Course coordinator. Extensions will be granted only on medical or compassionate grounds under extreme circumstances.

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 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 2 2022 will be held on (TBC) should you be required to sit one.

This course outline sets out description of classes at the date the Course Outline is published. The nature of classes may change during the Term after the Course Outline is published. Moodle should be consulted for the up to date class descriptions. If there is any inconsistency in the description of activities between the University timetable and the Course Outline (as updated in Moodle), the description in the Course Outline/Moodle applies.

Image Credit

Synergies in Sound 2016

CRICOS

CRICOS Provider Code: 00098G

Acknowledgement of Country

We acknowledge the Bedegal people who are the traditional custodians of the lands on which UNSW Kensington campus is located.