MMAN9452

Masters Project B

Term Three // 2020

School of Mechanical and Manufacturing Engineering // UNSW Engineering

Course Overview

Staff Contact Details

Convenors

Name	Email	Availability	Location	Phone
Tracie Barber	t.barber@unsw.edu.au	Please contact by email or Teams	J17 401A	93854081

School Contact Information

Location

Email

Engineering Student Support Services – current student enquiries

- e.g. enrolment, progression, clash requests, course issues or program-related queries

Engineering Industrial Training – Industrial training questions

UNSW Study Abroad – study abroad student enquiries (for inbound students)

UNSW Exchange – student exchange enquiries (for inbound students)

UNSW Future Students – potential student enquiries

- e.g. admissions, fees, programs, credit transfer

School Office – School general office administration enquiries

- NB: the relevant teams listed above must be contacted 9 student enquiries

Course Details

Credit Points 4

Summary of the Course

The project 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. Master 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 project 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 the ability to work in a research and development environment. You must identify a supervisor and project prior to enrolling in this course. This is the second course of the 3 course project structure.

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.

Teaching Strategies

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

Assessment

Assessment Tasks

Assessment task	Weight	Due Date	Student Learning Outcomes Assessed
Master project and report	10%	13/11/2020 05:00 PM	1, 4, 5

Assessment Details

Assessment 1: Master project and report

Details:

Resources

Recommended Resources

Not available

Course Evaluation and Development

Laboratory Workshop Information

COVID-19 NOTE: The School laboratory facilities are open to research thesis students in T2; however, access is limited. To comply with government's social distancing requirements, e.g., 4 square meters per person, each room has a maximum capacity limit, which will be monitored by the supervising professional staff. Please check with the laboratory officer in your area before accessing and observe the limit and all other safety precautions.

You must seek guidance and approval from your Thesis supervisor prior to any laboratory activities.

The laboratories are the responsibility of the staff-in-charge, and you must operate within the accepted practices of the laboratory concerned. Laboratory staff are highly skilled and helpful; take full advantage of their experience; however, you should not expect laboratory staff to take responsibility for your thesis or carry out work for you.

If your project involves laboratory work, contact the officer-in-charge (OIC) of the laboratory in which you will be working as soon as possible to discuss your requirements. They will issue you with a Laboratory Access Approval (LAA) form which you must complete and return to the OIC.

For more information about accessing the School's laboratories, please visit the School website: https://www.engineering.unsw.edu.au/mechanical-engineering/resources/lab-access-how-to-forms

Workshop

You must seek guidance and approval from your Thesis supervisor prior to requesting any workshop activities.

All student activities requiring manufacture in the Mechanical and Manufacturing Engineering (MME) workshop should be discussed with the workshop personnel at the inception of the work. The workshop personnel must have the opportunity to advise and influence the design to help minimise assembly, manufacture or functional problems.

The workshop is usually in very high demand. If you require the workshop to manufacture equipment essential to your thesis, then make sure that you discuss your requirements as early as possible with the Workshop/Laboratory Manager. You should provide engineering drawings which are first approved by the laboratory OIC. You should make every effort to minimise the Workshop load by modifying existing equipment rather than building from new, and by keeping your designs simple.

assessment performance, you are eligible to apply for Special Consideration prior to submitting an

Academic Honesty and Plagiarism

UNSW has an ongoing commitment to fostering a culture of learning informed by academic integrity. All UNSW students have a responsibility to adhere to this principle of academic integrity. Plagiarism undermines academic integrity and is not tolerated at UNSW. *Nj_eg_pgqk _r SLQU gq bcdglcb _q sqgle rfc umpbq mp gbc_q md mrfcpq _lb n_qqgle rfck mdd _q wmsp mul,*

Plagiarism is a type of intellectual theft. It can take many forms, from deliberate cheating to accidentally copying from a source without acknowledgement. UNSW has produced a website with a wealth of resources to support students to understand and avoid plagiarism, visit: student.unsw.edu.au/plagiarism. The Learning Centre assists students with understanding academic integrity and how not to plagiarise. They also hold workshops and can help students one-on-one.

You are also reminded that careful time management is an important part of study and one of the identified causes of plagiarism is poor time management. Students should allow sufficient time for research, drafting and the proper referencing of sources in preparing all assessment tasks.

If plagiarism is found in your work when you are in first year, your lecturer will offer you assistance to improve your academic skills. They may ask you to look at some online resources, attend the Learning Centre, or sometimes resubmit your work with the problem fixed. However more serious instances in first year, such as stealing another student's work or paying someone to do your work, may be investigated under the Student Misconduct Procedures.

Repeated plagiarism (even in first year), plagiarism after first year, or serious instances, may also be investigated under the Student Misconduct Procedures. The penalties under the procedures can include a reduction in marks, failing a course or for the most serious matters (like plagiarism in an honours thesis) even suspension from the university. The Student Misconduct Procedures are available here:

www.gs.unsw.edu.au/policy/documents/studentmisconductprocedures.pdf

Academic Information

Credit points

Course credit is calculated in Units-Of-Credit (UOC). The normal workload expectation for one UOC is approximately 25 hours per term. This includes class contact hours, private study, other learning activities, preparation and time spent on all assessable work.

Most coursework courses at UNSW are 6 UOC and involve an estimated 150 hours to complete. Each course includes a prescribed number of hours per week (h/w) of scheduled face-to-face and/or online contact. Any additional time beyond the prescribed contact hours should be spent in making sure that you understand the lecture material, completing the set assignments, further reading, and revising for any examinations.

On-campus class attendance

Public distancing conditions must be followed for all T3 face-to-face classes. To ensure this, only students enrolled in those classes will be allowed in the room. Class rosters will be attached to corresponding rooms and circulated among lab demonstrators. No over-enrolment is allowed in face-to-face class. Students enrolled in online classes can swap their enrolment from online to other additional, but limited, number of on-campus classes by Sunday, Week 1. Please refer to your course's Microsoft Teams and Moodle sites for more information about class attendance for in-person and online class sections/activities.

Your health and the health of those in your class is critically important. You must stay at home if you are sick or have been advised to self-isolate by NSW health or government authorities. Current alerts and a list of hotspots can be found

Important Links