

# Source Outline





## Contact hours

There are no set contact hours for thesis.

## Summary and Aims of the 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.

This course requires each student to demonstrate managerial, technical and professional skills in planning and executing an approved engineering project within a stipulated time limit. The student should show improved project management skills in the progression from Thesis A to B and C, as well as a deeper understanding of the specific research topic. Each student is guided by their supervisor, but successfully planning, executing and reporting on the project are the sole responsibility of each student.

It is not the responsibility of the supervisor to tell the student what to do, nor should it be assumed that the supervisor is an expert in all areas of engineering. They are there to offer guidance and advice, as are laboratory staff, workshop staff, and others in the school that may have expertise in the area of your project. The successful execution of the project is solely the responsibility of the student.

### *Organisation and prerequisites*

The undergraduate Research Thesis is organised in three courses: Thesis A (MMAN4951), B (MMAN4952) and C (MMAN4953). By default, students must ordinarily take Thesis A, Thesis B and Thesis C consecutive terms. Thesis A is therefore the first course you have to undertake for the completion of the Research Thesis and can be started in any of the three terms. Thesis A is a prerequisite for Thesis B, and Thesis B is a prerequisite for Thesis C. If you need to complete your Thesis in two terms only and your program allows it, then you should choose the Practice thesis stream (MMAN4010-MMAN4020).

### *B+C Term in one Term*

With School permission and only in exceptional circumstances, students may apply to take Research Thesis A in one term, then Research Thesis B and C together in the subsequent term. This option is limited to students who have exceptional circumstances, have a compelling reason not choose the Practice thesis stream and can demonstrate an

outstanding ability to progress. Moreover, it requires a prerequisite waiver to waive the Thesis B requirement for Thesis C.

### **Laboratory Activities and Staff**

COVID-19 NOTE: The School laboratory facilities are open to research





## Assessment overview

| Assessment      | Group Project? (# Students per group) | Length   | Weight | Learning outcomes assessed | Assessment criteria | Due date and submission requirements  | Deadline for absolute fail  | Marks returned             |
|-----------------|---------------------------------------|--|--------|----------------------------|---------------------|---|---|----------------------------|
| Progress Report | No                                    | 10 pages max (excl. appendices and references) | 10%    | 1, 2, 3, 4 and 5           | Rubric below        | Friday 5 PM Week 9 for students enrolled in Thesis B <b>only</b><br><br>Monday 5 PM Week 4 for students enrolled in B+C concurrently* | 5 PM Friday Week 10 (students enrolled in Thesis B <b>only</b> )<br><br>5 PM Week 5 (students enrolled in B+C concurrently) | Two weeks after submission |

\* The early deadline for B+C students is due to the need to have supervisors provide preliminary feedback to students before census date.







| Criterion | Wt | Accomplished | Distinguished | Solid  | Adequate | Deficient |
|-----------|----|--------------|---------------|--------|----------|-----------|
|           |    | 85-100%      | 75-84%        | 65-74% | 50-64%   | 0-49%     |

Document presentation

## Submission

Please submit your report electronically, directly through the submission inbox which will be

### *Confidential Submission*

Confidential submission can be granted by the course conveners in case of confidential projects (e.g. with sensitive data from company partners). This must be requested from the course convenor at the beginning of Thesis A (not later than Week 4 of Thesis A) by the student and have the support of the supervisor (email explaining reason). If you have been by means of a medium agreed with your supervisor, still within the same assignment deadline.

Please note that Thesis C will require two markers, so you and your supervisor will need to propose a solution that satisfies your confidentiality constraints. The conveners will have to approve your proposed solution before the beginning of Thesis C.

that the confidentiality constraints are met in the processes of submission, marking and thesis document management.

### *Late submission of the report (Thesis B)*

Late submissions for Thesis B will not be accepted, unless agreed with the course convenor prior to Friday 5pm, Week 9.

For details of applying for Special Consideration and conditions for the award of consideration, please see the [Special Consideration page](#).

Other applications for extension of submission of thesis reports (e.g. equipment breakdown, etc.) must comply with the following:

1. The request for extension must come from the supervisor. That is, it is written by, and justified, by the supervisor.
2. Request must be lodged by week 7 of term.

### *Feedback and Template use*

The supervisor (or a delegated marker in case of supervisor unavailability) will assess the progress and may ask for additional material. It is up to you to discuss with your supervisor the exact layout of the report, but it should be based on the template that will be made available.

## **7. Communication if you Fail**

If you Fail in Research eao EM24 477.79 T95.3xR13o4n /MCID2(B(i)5c6 Tf1 0 0 1 102.62 511.63 Tm0 g0

## 10. Academic honesty and plagiarism

UNSW has an ongoing commitment to fostering a culture of learning informed by academic



# Competencies

*Stage 1 Competencies for Professional Engineers*