



Mechanical and Manufacturing Engineering

Course Outline  
Term 1 2019

**MMAN9002**

**MASTER OF ENGINEERING SCIENCE  
PROJECT B**

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# I. Staff contact

## Contact details and consultation times for course convenor

Name: Dr Ron Chan

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.

Project B is to be taken in the last semester required for the completion of all requirements for the award of the degree. This course – together with MMAN9001 Master of Engineering Project A, which is to be taken in the previous semester– requires each student to demonstrate managerial, technical and professional skills in planning and executing an approved engineering project within a stipulated time limit. Each student is guided by a supervisor, but successfully planning, executing and reporting on the project are the sole responsibility of each student.

### **Laboratory Staff**

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

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.

Before you start work in a laboratory or undertake any activity which might be considered hazardous in any way, you must read and understand the practices and procedures described in the OHS section of the School's intranet.

### **Machine Workshop**

All student activities requiring manufacture in the Machine 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.

### **Student learning outcomes**

This course is designed to address the learning outcomes below and the corresponding Engineers Australia Stage 1 Competency Standards for Professional Engineers as shown. The full list of Stage 1 Competency Standards may be found in Appendix A.



## 6. Assessment

### Assessment overview

Assessment	Group Project?	If Group, # Students per group	Length	Weight	Learning outcomes assessed	Assessment criteria	Due date and submission requirements	Deadline for absolute fail	Marks returned
Milestone Evaluation I	No	N/A	2-page, single-sided, min. font 11	10%	1, 2, 3 and 4	Progress and Presentation Skills	Week 3	1 week after the due date	2 weeks after submission
Milestone Evaluation II	No	N/A	2-page, single-sided, min. font 11	10%	1, 2, 3 and 4	Progress and Presentation Skills	Week 6	1 week after the due date	2 weeks after submission
Project Presentation	Yes	Supervisor-dependent	15-minute per team	10%	1, 2, 3 and 4	See marking rubrics	Week 10-13	1 week after the due date	Upon release of final results
Final Report	No	N/A	50-page, single-sided, min. font 11	70%	1, 2, 3 and 4	See marking rubrics	Week 13	1 week after the due date	Upon release of final results

## Assignments

### *Presentation*

All submissions are expected to be neat and clearly set out. Your results are the pinnacle of all your hard work and should be treated with due respect. Presenting results clearly gives the marker the best chance of understanding your method; even if the numerical results are incorrect.

### *Submission*

Work submitted late without an approved extension by the course coordinator or delegated authority is subject to a late penalty of 20 percent (20%) of the maximum mark possible for that assessment item, per calendar day.

The late penalty is applied per calendar day (including weekends and public holidays) that the assessment is overdue. There is no pro-rata of the late penalty for submissions made part way through a day.

Work submitted after the 'deadline for absolute fail' is not accepted and a mark of zero will be awarded for that assessment item.

For some assessment items, a late penalty may not be appropriate. These are clearly indicated in the course outline, and such assessments receive a mark of zero if not completed by the specified date. Examples include:

- a. Weekly online tests or laboratory work worth a small proportion of the subject mark,  
or
- b. Online quizzes where answers are released to students on completion, or
- c. Professional assessment tasks, where the intention is to create an authentic assessment that has an absolute submission date, or
- d. Pass/Fail assessment tasks.

### *Marking*

Marking guidelines for assignment submissions will be provided at the same time as





### *Production and Submission Specifications*

All project students are required to submit copies of their project in the formats shown below. Students who do not submit as required will be denied graduation until the requirements have been met.

#### *One PDF copy through Moodle*

You **MUST** submit a PDF copy through the Project B Moodle page. Name this file 'z1234567\_Project', with '1234567' being your student ID number.

The submitted file should be less than 20mb. If you feel that your work would benefit from a larger, higher-res version, please submit this directly to your supervisor. The electronic version must have the copyright declaration included in it, as a scanned version of the signed original, though by your submission you will also agree that the work is all your own.

#### *Data*

Your project mark will not be released until you have organised to pass on your project data to your supervisor. This can be Dropbox, USB stick, hard drive – discuss with your supervisor. However, it is now a legal requirement of research conducted at UNSW that the original data be archived, and so you must collate all the work that went into your project (drawings, excel files, CAD files, CFD/FEA result files, etc. – everything that went into creating your project, but not early work or dead-ends that did not make the cut). Your supervisor will mark this task complete on Moodle.

#### *Specifications for Project*

Paper must be ISO size A4 (210 x 297mm). All text should be size 11 or 12 font Times New Roman or close equivalent serif font, apart from titles and figures. Margins must be not less than 30 mm at the left and right edge, 30 mm at the upper edge, and 20 mm at the lower edge.

The project must include a title sheet headed:

**UNSW SYDNEY**  
**SCHOOL OF MECHANICAL AND MANUFACTURING ENGINEERING**  
**Title of Project**  
**Name of Author**  
**Student ID**  
**Masters of Engineering (or other degree for which the project is submitted)**  
**Date of submission (Month and Year)**  
**Supervisor's name**

All sheets must be numbered. The main body of the project must be numbered consecutively from beginning to end in Arabic numerals (i.e. 1, 2, 3, etc.). The preliminary pages (Abstract, List of Contents, List of Figures, List of Symbols) should be numbered using lower-case Roman numerals (i.e. i, ii, iii, etc.), commencing with the title page (but not

shown on the title page). Pages in appendices may be numbered consecutively from the main text or may have their own numbering system.

Graphs, diagrams and photographs should be inserted as close as possible to their first reference in the text. Graphs and tables which are printed in landscape format should be readable from the right-hand side.

Supplementary data (e.g. CFD animations) can also be uploaded within the size limit and can be referenced within the text. These are considered as extra material. The project must stand alone without them.





UNSW Library website: <https://www.library.unsw.edu.au/>  
Moodle: <https://moodle.telt.unsw.edu.au/login/index.php>

## 8. ~~Course evaluation and development~~

Feedback on the course is gathered periodically using various means, including the UNSW myExperience process, informal discussion in the final class for the course, and the School's Student/Staff meetings. Your feedback is taken seriously, and continual improvements are made to the course based, in part, on such feedback.

In this course, recent improvements resulting from student feedback include more demonstrator support to the student major group project.

### ~~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. *Plagiarism at UNSW is defined as using the words or ideas of others and passing them off as your own.*

## 10. ~~Administrative~~ matters

All students are expected to read and be familiar with School guidelines and policies, available on the intranet. In particular, students should be familiar with the following and be following

# Appendix A: Engineers Australia (EA) Competencies

## Stage 1 Competencies for Professional Engineers

	<b>Program Intended Learning Outcomes</b>
<b>PE1: Knowledge and Skill Base</b>	PE1.1 Comprehensive, theory-based understanding of underpinning fundamentals
	PE1.2 Conceptual understanding of underpinning maths, analysis, statistics, computing
	PE1.3 In-depth understanding of specialist bodies of knowledge
	PE1.4 Discernment of knowledge development and research directions
	PE1.5 Knowledge of engineering design practice
	PE1.6 Understanding of scope, principles, norms, accountabilities of sustainable engineering practice
<b>PE2: Engineering Application Ability</b>	PE2.1 Application of established engineering methods to complex problem solving
	PE2.2 Fluent application of engineering techniques, tools and resources
	PE2.3 Application of systematic engineering synthesis and design processes