



C L L L

UNSW
AUSTRALIA

Never Stand Still

Engineering

Mechanical and Manufacturing Engineering

Engineering

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3. The Project

This course is conducted as a project based course in which the material presented is related to the tasks that a student needs to attempt to achieve the final goal of the project. Therefore, the presentation of the material will vary from week to week. Initially there will be lectures and problem solving classes to guide you through the project, while in the later weeks you will be required to be self-sufficient to finalise the project. However, the project will be assessed over the different periods for the milestones achieved.

There will be laboratory work for hands-on experience in creating the design that you have developed. In relation to the product development, it is expected that you will be able to design and develop a product that meets the requirements of the project.

	high volume Manufacture	Theatre (G04)	Manufacturability, Material Selection and High Volume Manufacturing		Lecture Notes + Final Report Assessment Guide
18/4/17	Mid-Session Break				
25/4/17	Public Holiday				

Material

2/5/17

Assessment overview

Assessment	Length	Weight %	Learning outcomes assessed	Assessment criteria	Due date and submission requirements	Deadline for absolute fail	Marks returned
Concept Sketch + Engineering Drawing	TBA on Moodle	15	1,2,3,4	Detailed Assessment Criteria will be uploaded on the Moodle, Individual submission	Week 6, in the classroom	N/A	Two weeks after submission
Manufacturability Review	TBA on Moodle	10	1,2,3,4,5,6	Detailed Assessment Criteria will be uploaded on the Moodle, Individual submission	Week 7, in the classroom	N/A	Two weeks after submission
CAD Test	TBA on Moodle	10	1,2,3,4	Detailed Assessment Criteria will be uploaded on the Moodle, Individual assessment	Week 9 During CAD Lab.	N/A	Two weeks after submission
Final Report	TBA on Moodle	35	1,2,3,4	Detailed Assessment Criteria will be uploaded on the Moodle, Group + Individual assessment	Week 12, in the classroom	N/A	Two weeks after submission
Prototype Testing	TBA on Moodle	10	1,2,3,4,5,6	Detailed Assessment Criteria will be uploaded on the Moodle, Group submission	Week 13 TBD	N/A	Two weeks after submission
TAFE Assessments	TAFE will announce	20	5,6	Individual assessment	TAFE will announce	N/A	TAFE will announce

Assignments

Presentation

All non-electric submissions should have a standard School cover sheet which is available from this course's Moodle page.

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

Late submissions will be penalised 5 marks per calendar day (including weekends). An extension may only be granted in exceptional circumstances. Tc 0 Tw 26.87 0 31.1 04. EMC /H3 <</M

Calculators

You will need to provide your own calculator, of a make and model approved by UNSW, for the examinations. The list of approved calculators is shown at student.unsw.edu.au/exam-approved-calculators-and-computers

It is your responsibility to ensure that your calculator is of an approved make and model, and to obtain an “Approved” sticker for it from the School Office or the Engineering Student Centre prior to the examination. Calculators not bearing an “Approved” sticker will not be allowed into the examination room.

Special consideration and supplementary assessment

For details of applying for special consideration and conditions for the award of supplementary assessment, see the School [intranet](#), and the information on UNSW’s [Special Consideration page](#).

6. E

- (1) *Manufacturing Engineering and Technology*, S. Kalpakjian and S R Schmid. Prentice Hall
- (2) *Engineering Drawing*, A. W. Boundy, McGraw Hill (7th Edition).
- (3) *Material Selection in Mechanical Design*, Ashby, M., Elsevier.
- (4) *Dimensioning and Tolerancing for Function and Economic Manufacture*, L. E. Farmer, Blueprint Publications.
- (5) *Manufacturing Processes* B.H. Amstead, P.F. Ostwald and M.L. Begeman.
- (6) *Materials and Processes in Manufacturing*, E.P. Degamo, J.P. Black and R.A. Kohser.
- (7) *Product Design and Process Engineering*, B.W. Niebel and A.B. Draper.
- (8) *Manufacturing Processes*, H.W. Yankee.
- (9) Moodle based learning modules.

Additional material can be found at the UNSW Library via <https://www.library.unsw.edu.au/>

Additional materials provided in Moodle

Course will be administered by using Moodle. Therefore, course administration and lecture materials will be uploaded to Moodle. Students are advised to use Moodle for class communication

7. C

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 streamlining of assignments and providing more information on pump design information early in the course.

8. A

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.*

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: 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 a

- x [Attendance, Participation and Class Etiquette](#)
- x [UNSW Email Address](#)
- x [Computing Facilities](#)
- x [Assessment Matters](#) (including guidelines for assignments, exams and special consideration)
- x [Academic Honesty and Plagiarism](#)
- x [Student Equity and Disabilities Unit](#)
- x [Health and Safety](#)
- x [Student Support Services](#)

*Name: Prof. S. Kara
Date: 3/2/2017*

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Stage 1 Competencies for Professional Engineers

	Program Intended Learning Outcomes
PE1: Knowledge and Skill Base	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
PE2: Engineering Application Ability	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
	PE2.4 Application of systematic approaches to the conduct and management of engineering projects
PE3: Professional and Personal Attributes	PE3.1 Ethical conduct and professional accountability
	PE3.2 Effective oral and written communication (professional and lay domains)
	PE3.3 Creative, innovative and pro-active demeanour
	PE3.4 Professional use and management of information
	PE3.5 Orderly management of self, and professional conduct
	PE3.6 Effective team membership and team leadership