



Mechanical and Manufacturing Engineering

Course Outline

Semester 2 2018

MMAN2130

DESIGN AND MANUFACTURING

[Contact hours](#)

	Day	Time	Location
Lectures	Thursday	9am – 11am	H6 G16
Week 1-10 Design Conclaves			
CAD Labs **	Thursday	12noon – 1:30pm	J17 203; OR
Weeks 2-9	Thursday	1:30pm – 3:00pm	J17 203
TAFE**	Tuesday	4:30pm – 9:30pm	Ultimo TAFE; OR

Week	Topic	Location	Lecture Content	CAD Lab Content	Suggested Readings
Week5	Limits Fits & Tolerances	H6 G16	Limits, Fits and tolerances and their application in design.	Engineering drawing	Week 5 See Moodle
Week6	Process Planning	H6 G16	Process Plan Assembly Plan BOM	Assemblies	Week 6 See Moodle
Week7	Design for high volume Manufacture	H6 G16	Design for Manufacturability, Material Selection and High Volume Manufacturing	Fasteners	Week 7 See Moodle + Final Report Assessment Guide
Week8	Material Selection Introduction	H6 G16	Utilizing Material Index's	Patterning & Mirroring	Week 8 See Moodle
Week9	Material Selection - Detail	H6 G16	Design for Manufacture, Material Selection and High Volume Manufacturing	CAD summary (final)	Week 9 See Moodle
MSB	Mid-Session Break				
Week10 <i>(final TAFE this week)</i>	Advanced Manufacturing Techniques	H6 G16	Design for Manufacture, Material Selection and High Volume Manufacturing		Week 10 See Moodle
Week11	Prototype Testing	Willis J18 UTL	Prototype testing		Week 11 See Moodle for Final Report Assessment Guide
Week12	Contingency				

6. Assessment

You are assessed by way of a product development project which involves designing and manufacturing a product based on given functional specifications. This project will test your ability to demonstrate applied knowledge, which you will be expected to perform as an engineering student.

The weighting of the individual assessment components will be as follows in the table with full details on each assessment provided under Moodle/Assignments.

Assessment overview

Assessment	Length	Weight %	Learning outcomes assessed	Assessment criteria	Due date and submission requirements	Deadline for absolute fail	Marks returned
1 (a): Concept Sketch	TBA on Moodle	10	1,2,3,4	Detailed Assessment Criteria will be uploaded on the Moodle, Individual submission	Week 5 on Moodle	Week 7 (Mon)	Two weeks after submission
1 (b): Engineering Drawing & Manufacturability Review	TBA on Moodle	20	1,2,3,4,5,6	Detailed Assessment Criteria will be uploaded on the Moodle, Individual submission	Week 7 on Moodle	Week 9 (Mon)	Two weeks after submission
2. Final Report	TBA on Moodle	40	1,2,3,4	Detailed Assessment Criteria will be uploaded on the Moodle, Group + Individual assessment	Week 12 on Moodle	Week 14 (Mon)	Two weeks after submission
3. Prototype Testing	TBA on Moodle	10	1,2,3,4,5,6	Detailed Assessment Criteria will be uploaded on the Moodle, Group submission	Week 11	Week 11	Two weeks after submission
4. TAFE Assessments	TAFE will announce	20	5,6	Individual assessment	TAFE will announce	Ref TAFE	T

Assignments

Presentation

WRITTEN SUBMISSIONS (excluding 1(a)) MUST BE TYPED (including any equations and calculations) and shall be submitted via Moodle with a standard School cover ,

Special consideration and supplementary assessment

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

7. Expected resources for students

The UNSW Library has several of the following in eBook format which are gradually being linked into this course's Moodle lesson-books using Leganto

- x [Attendance, Participation and Class Etiquette](#)
- x [UNSW Email Address](#)
- x

Appendix A: Engineers Australia (EA) Competencies

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