



Source Outline
Term 2 2020

MMAN2130

DESIGN AND MANUFACTURING

1. Staff contact details

Contact details for Mr Daniel Egger

Name: Mr Daniel Egger

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Moodle: <https://moodle.telt.unsw.edu.au/mod/page/view.php?id=2869027>

Microsoft Teams Video Chat Hours: Monday 1-2pm and Friday 3-4pm. You must arrange an appointment via email.

IMPORTANT: All initial communication must be through email. Your email must contain the following:

Your name and student number

computer-aided manufacture (CAM) skills. You will learn how to generate graphical outputs such as 3D models and engineering drawings to facilitate design solutions. You will acquire the skills necessary to take your CAD model from the virtual world and machine it on a computer numerical control (CNC) machine. Remember this moment: by the end of this term, you will be marveling at your own machined creation.

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.

After successfully completing this course, you should be able to:

Learning Outcome		EA Stage 1 Competencies
1.	Identify which manufacturing processes must be used to create desired products.	PE1.1, PE1.5, PE2.2
2.	Explain how manufacturing processes impact design and production.	PE1.1, PE1.3, PE1.5, PE2.2, PE2.3
3.	Operate fundamental metalworking machinery to generate components.	PE1.5, PE2.2, PE2.3, PE3.3, PE3.5
4.	Prepare components for manufacture using CAM software.	PE1.5, PE2.2, PE2.3, PE3.2
5.	Construct CAD models and engineering drawings from real world inputs.	PE1.5, PE2.2, PE2.3, PE3.2, PE3.3, PE3.4
6.	Interpret engineering drawings to drive manufacturing processes.	PE1.1, PE1.3, PE1.5, PE2.2, PE2.3, PE3.2, PE3.4
7.	Recognise the role Australian Standards play in engineering practice.	PE1.5, PE1.6, PE2.3, PE3.1, PE3.2, PE3.4

4. Teaching strategies

Online: There are two online forums for participation in this class. The first is the Moodle Platform, specifically the MMAN2130 course at <https://moodle.telt.unsw.edu.au/>. The second is the MMAN2130 Team site hosted in Microsoft Teams. All official online interactions will take place or be linked clearly and appropriately from these sites.

In class: There are three in-class activities in a typical week which we refer to as the Lecture, Problem Solving Class and CAD Lab based on the timetable in Section 3. The online segments of this course are organised on the following principles:

1. **Learning:** Student learning is the first priority - teaching and assessment are secondary concerns. Learning here is defined as gaining new ways of understanding the field of design and manufacturing in mechanical engineering; not as simply memorising information. We are trying to transform you into engineers and critical thinkers in the discipline.

2.

Assignments

Presentation

All submissions are expected to be neat

Please note that UNSW now has a [Fit to Sit / Submit rule](#)

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

