

Course Outline

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You should aim to spend about 9 h/w on this course. The additional time should be spent in making sure that you understand the lecture material, completing the set assignments, further reading, and revising for any examinations.

Contact hours

	Day	Time	Delivery Mode
Lectures	Wednesday	1 hr/wk	Moodle Recorded
			Lectures
Demonstrations	Wednesday	10am 12pm	Microsoft Teams
			Chat Channel
Lab N/A	NI/A	8 hrs/wk	See Moodle for
	0 1115/ WK	details	

All classes in T2 2020 will be online. Please consult this Moodle module for details about delivery.

Summary and Aims of the course

Additive manufacturing, also known as 3D printing, is an emerging advanced manufacturing technique which has enjoyed a rapid growth in recent years. It has been considered as a national strategic priority in many countries in Europe and North America, and this field of research is expected to grow even faster in the near future in Australia. Due to its layer-wise fabrication5.32 8 3 0.4/F1 11.04 Tf1 0 0 .92 reW*nBT 377.33 Tm0 (**p**v)5(i)B108u.s

Aside from lectures and tutorials, this course also includes demonstrations where you will have first-hand experience in various additive manufacturing machines available in the School of Mechanical and Manufacturing Engineering.

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
Understand the fundamental basis and nature of additive	

1. Understand the fundamental basis and nature of additive manufacturing

Assignments

Assignment 1 requires each student or a group of students (depending on the number of the

marked according to the marking guidelines provided.

Examinations

You must be available for all quizzes, tests and examinations.

Final examinations for each course are held during the University examination periods: February for Summer Term, May for T1, August for T2, and November/December for T3.

Please visit myUNSW for Provisional Examination timetable publish dates.

For further information on exams, please see the **Exams** webpage.

Special consideration and supplementary assessment

If you have experienced an illness or misadventure beyond your control that will interfere with your assessment performance, you are eligible to apply for Special Consideration prior to submitting an assessment or sitting an exam.

Please note that UNSW now has a <u>Fit to Sit / Submit rule</u>, which means that if you attempt an exam or submit a piece of assessment, you are declaring yourself fit enough to do so

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, visit: <u>student.unsw.edu.au/plagiarism</u>. 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

or paying someone to do your work, may be investigated under the Student Misconduct

<u>in a serie and competencies</u>

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

Stage 1 Competencies for Professional Engineers

PE3: Professional and Personal Attributes