



Mechanical and Manufacturing Engineering

Course Outline
Term 1 2019

MANF9544

**CONCURRENT PRODUCT AND
PROCESS DESIGN**



1. Staff contact

Contact details and consultation times for course convenor

Name: Prof Sami Kara
Office location: Ainsworth Building, 301A
Tel: (02) 9385 5757
Email: S.Kara@unsw.edu.au
Moodle: <https://moodle.telt.unsw.edu.au/login/index.php>

Consultation concerning this course is available on Tuesday 1300 – 1700 whenever the lecturer is not otherwise engaged.

Contact details and consultation times for additional lecturers/demonstrators/lab staff

Name: Dr Shiva Abdoli
Office location: Ainsworth Building, 301
Tel: (02) 9385 6851
Email: s.abdoli@unsw.edu.au

Please see the course [Moodle](#).

2. Important links

- [Moodle](#)
- [Lab Access](#)
- [Computing Facilities](#)
- [Student Resources](#)
- [Course Outlines](#)
- [Engineering Student Support Services Centre](#)

3. Course details

Credit points

This is a 6 unit-of-credit (UoC) course, and involves 3 hours per week (h/w) of face-to-face contact.

Contact hours

	Day	Time	Location
Lectures	Tuesday	6pm – 8pm	Ainsworth 202 (K-J17-202)

Demonstrations

Summary and Aims of the course

This course introduces the core activities of concurrent development of products, processes, systems, and quality. Therefore, this course is a core part of the MEngSc program in Manufacturing Management and relates its contents to other courses in the program, such as Manufacturing Strategies, Managing Manufacturing Operations and Production Technologies.

The need for companies to develop products that the customer wants and to do this in the shortest possible time has become one of the main success factors on the market. Concurrent Product and Process Development is one of the key strategies that address this problem of fast product development and customer satisfaction by taking into account

5. ~~Course schedule~~

Week	Topic	Demonstration/Lab Content	Location	Suggested Readings
------	-------	------------------------------	----------	-----------------------

6. Assessment

Assessment overview

Assessment	Group Project?	If Group, # Students per group	Length	Weight	Learning outcomes assessed	Assessment criteria
------------	----------------	--------------------------------	--------	--------	----------------------------	---------------------

Assignments

The assessment tasks will be provided during the class on the dates described in the *Assessment overview* table. The assessment tasks and their detail will be provided on Moodle at <https://moodle.telt.unsw.edu.au/login/index.php>

Presentation

All non-electronic submissions should have a standard School cover sheet, which is available from this 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

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.

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

6. CIMware Limited, Guildford, England, 1994.
7. Geoffrey Boothroyd, Peter Dewhurst, Winston Knight: "Product Design for Manufacture and Assembly", Marcel Dekker, 1994.
8. Geoffrey Boothroyd, Peter Dewhurst: "Product Design for Assembly", Handbook, Boothroyd Dewhurst Inc, 1991.
9. Kim Clark, Stephen Wheelwright: "Managing New Product and Process Development" and "Revolutionizing Product Development", Free Press, New York, 1993.
10. Sammy G. Shina: "Successful Implementation of Concurrent Engineering Products and Processes." Van Nostrand Reinhold, New York, 1994.
11. Ben Wang: "Integrated Product, Process and Enterprise Design." Chapman & Hall, 1997.

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

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 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 an honours thesis) even suspension from the university. The Student Misconduct Procedures are available here:

www.gs.unsw.edu.au/policy/documents/studentmisconductprocedures.pdf

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:

[Attendance](#)

[UNSW Email Address](#)

[Computing Facilities](#)

[Special Consideration](#)

[Exams](#)

[Approved Calculators](#)

[Academic Honesty and Plagiarism](#)

[Student Equity and Disabilities Unit](#)

[Health and Safety](#)

[Lab Access](#)

[Makerspace](#)

[UNSW Timetable](#)

[UNSW Handbook](#)

[UNSW Mechanical and Manufacturing Engineering](#)

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
	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