



Source Outline

Term 1 2020

MANF9544

CONCURRENT PRODUCT AND PROCESS DESIGN

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1. Staff contact details

Contact details and consultation times for course convenor

Name: Dr. Shiva Abdoli

Office location: Ainsworth Building, 301A

Tel: (02)

4. Teaching strategies

The subject will be presented in the form of lectures and problem-solving classes. Weekly classes will consist of a 1-1.5 hrs lecture followed by a problem-solving class example or case study related to the material covered in the lecture.

5.

Week	Topic	Demonstration/Lab Content	Location	Suggested Readings
1	- Introduction and definitions		Ainsworth 202	Lecture notes on Moodle
2	- Product Development and Time-to-Market Concept	Economic Trade-off Analysis in Product Development Exercise	Ainsworth 202	Lecture notes and reading material on Moodle
3	- Quality Function Deployment	QFD Exercise	Ainsworth 202	Lecture notes on Moodle
4	- Design for Manufacture (DFM)	None	Ainsworth 202	Lecture notes and reading material on Moodle
5	- Design for Assembly (DFA) - Modularization	DFA Exercise	Ainsworth 202	Lecture notes and reading material on Moodle
6	- Design for Environment (DFE) - Design for Reliability (DFR) - Systems Engineering	Trade-off Analysis	Ainsworth 202	Lecture notes and reading material on Moodle
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6. Assessment

Assessment overview

Assessment	Group Project?	If Group, # Students per group	Length	Weight	Learning outcomes assessed	Assessment criteria	Due date and submission requirements	Deadline for absolute fail
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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

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 available 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 that it is not a programmable calculator. For more information, please contact the [Engineering Student Support Services Centre](#). Calculators are not permitted into the examination room.

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 [Fit to Sit / Submit rule](#), which means that if you sit an exam or submit a piece of assessment, you are declaring yourself fit enough to do so and cannot later apply for Special Consideration.

For details of applying for Special Consideration and conditions for the award of supplementary assessment, please see the [UNSW Special Consideration page](#).

7. Expected resources for students

Textbooks are suggested in Moodle for presented lectures in each week.

Suggested Additional Readings

1. Thomas A. Salomone: "What every Engineer should know about CONCURRENT ENGINEERING", Marcel Dekker, 1995.
2. James L. Nevins, Daniel E. Whitney: "Concurrent Design of Products and Processes", A Strategy for the Next Generation in Manufacturing, McGraw-Hill Publishing Company, 1989. (good textbook but out of print)
3. Andrew Kusiak: "Concurrent Engineering", Automation, Tools, and Techniques, John Wiley & Sons Inc., 1993.
4. John Corbett, Mike Dooner, J. Meleka, C. Pym: "Design for Manufacture", Strategies, Principles, and Techniques, Addison-Wesley Publishing Company, 1991.
5. Paul G. Ranky: "Concurrent/Simultaneous Engineering", Methods, Tools and Case Studies.
6. CIMware Limited, Guildford, England, 1994.
- 7.

