



# Course Outline

Term 1 2020

**MANF4100**

## **DESIGN AND ANALYSIS OF PRODUCT-PROCESS SYSTEMS**



# 1. Staff contact details

## Contact details and consultation times for course convenor

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Consultation concerning this course is available immediately after the classes. Direct consultation is preferred.

Please see the course [Moodle](#).



Learning Outcome	EA Stage 1 Competencies
4. Understand, implement and manage key manufacturing improvement strategies including lean manufacturing.	PE2.4, PE3.2, PE3.3

## 4. Teaching strategies

Lectures, statistics software package demonstrations, online quizzes, team assignments and final exam in the course are designed to cover the core knowledge areas in engineering statistics. They do not simply reiterate the texts, but build on the lecture topics using examples and cases taken directly from industry to show how the theory is applied in practice and the details of when, where and how it should be applied.

## 5.

Date	Lecture Content	Suggested Readings
<b>Week 1</b>	Introduction to Product-Process Systems, Key Factors of Success <ul style="list-style-type: none"> <li>• Global Manufacturing Issues</li> <li>• Comparison of Manufacturing Sectors</li> <li>• Competitive Strategy</li> <li>• Pusgy</li> </ul>	



Date	Lecture Content	Suggested Readings
<b>Week 8</b>	Aggregate Planning and Production Scheduling <ul style="list-style-type: none"> <li>• Sales and Operations Planning</li> <li>• Aggregate Planning Methods</li> <li>• Master production schedule</li> <li>• Lead time calculation</li> </ul>	Heizer, Operations management: sustainability and supply chain management, Part 3, Chapter 12 and 13
<b>Week 9</b>	Materials Requirements Planning, Lean Manufacturing <ul style="list-style-type: none"> <li>• Material requirements planning</li> <li>• Enterprise resource planning</li> </ul>	

6.



## Assignments

The assignment instructions will be posted on Moodle or handed out in class, and a reminder announcement will be made about due date for the assignments. The assignments support the learning outcomes by incorporating an appropriate mix of activities such as issue analysis and fact-based data analysis that support the design of appropriate solutions and strategies. The assignments also support collaborative teamwork and integration of different ideas and components into an overall coherent quality management strategy.

The following criteria will be used to grade assignments:

### *Viva*

The assignment will be assessed in person and feedback given as part of an oral weeks 5 and 10. A system will be implemented on Moodle for booking a time with your lecturers. The team will still need to prepare appropriate documentation and material as preparation for this assessment.

### *Executive Summary*

In addition to the Viva examination, each team is to provide a 1-page executive summary (excluding diagrams), outlining the key findings of the assignment.

### *Presentation*

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.

Work submitted  
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 completed by the specified date. Examples include:

a.





