

MANF6860

Strategic Manufacturing Management

Term 1, 2022



Course Overview

Staff Contact Details

Convenors

Name	Email	Availability	Location	Phone
Sami Kara	S.Kara@unsw.edu.au		Ainsworth Building, 301A	

Lecturers

Name	Email	Availability	Location	Phone
Bernard Kornfeld	b.kornfeld@unsw.edu.au		Ainsworth Building, 301	0407600268

School Contact Information

Location

UNSW Mechanical and Manufacturing Engineering

Ainsworth building J17, Level 1

Above Coffee on Campus

Hours

9:00–5:00pm, Monday–Friday*

*Closed on public holidays, School scheduled events and University Shutdown

Web

[School of Mechanical and Manufacturing Engineering](#)

[Engineering Student Support Services](#)

[Engineering Industrial Training](#)

[UNSW Study Abroad and Exchange](#) (for inbound students)

[UNSW Future Students](#)

Phone

(+61 2) 9385 8500 – Nucleus Student Hub

(+61 2) 9385 7661 – Engineering Industrial Training

(+61 2) 9385 3179 – UNSW Study Abroad and UNSW Exchange (for inbound students)

(+61 2) 9385 4097 – School Office**

**Please note that the School Office will not know when/if your course convenor is on campus or available

Email

[Engineering Student Support Services](#) – current student enquiries

- e.g. enrolment, progression, clash requests, course issues or program-related queries

[Engineering Industrial Training](#) – Industrial training questions

[UNSW Study Abroad](#) – study abroad student enquiries (for inbound students)

[UNSW Exchange](#) – student exchange enquiries (for inbound students)

[UNSW Future Students](#) – potential student enquiries

- e.g. admissions, fees, programs, credit transfer

[School Office](#) – School general office administration enquiries

- NB: the relevant teams listed above must be contacted for all student enquiries. The School will only be able to refer students on to the relevant team if contacted

Important Links

- [Student Wellbeing](#)
- [Urgent Mental Health & Support](#)
- [Equitable Learning Services](#)
- [Faculty Transitional Arrangements for COVID-19](#)
- [Moodle](#)
- [Lab Access](#)
- [Computing Facilities](#)
- [Student Resources](#)
- [Course Outlines](#)
- [Makerspace](#)
- [UNSW Timetable](#)
- [UNSW Handbook](#)

Course Details

Units of Credit 6

Summary of the Course

This course focuses on the links between both manufacturing strategies as well as operational performance and effective supply chain strategies for companies that operate globally with emphasis on how to plan and integrate supply chain components into a coordinated system. It covers thoroughly the fundamentals of operations management by introducing students to the key concepts of global supply chain and logistics management. Accordingly, the course introduces and utilizes key issues such as risk pooling and inventory placement, international capacity planning, global manufacturing, integrated planning and collaboration, lean production systems, managerial accounting system in manufacturing applications, financial strategy and information sharing in a network consisting of multi-suppliers, manufacturers, distributors, and customers. Several of these factors are evaluated so that the overall performance of the chain is optimised.

Course Aims

Students examine the primary importance of manufacturing, operations and accounting in the formulation and implementation of business and corporate strategy in companies. Using case studies, the course looks at strategic manufacturing decisions and how they influence the achievement of the firm's goals specifically at the role decision-makers of operations play in integrating those decisions with overall business and corporate strategies. Students develop a managerial point of view and gain understanding in "state of the art" strategic management thinking. The course is designed to produce graduates with the ability to use quantitative and analytical techniques to add value in a business environment. This involves building models of business problems and analysing business data. These analytical skills are sought after in all areas of business, for example in operations, in marketing and in finance.

Course Learning Outcomes

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

Learning Outcome	EA Stage 1 Competencies
1. understand the nature of manufacturing strategy and its relation to corporate strategy	PE1.3, PE2.3, PE3.6
2. develop a systematic plan for strategy implementation	PE1.3, PE1.5, PE2.3, PE3.6
3. understand the different types of globalised manufacturing and their implications	PE1.3, PE1.5, PE2.3, PE3.6
4. appreciate the importance of linking performance monitoring to manufacturing strategy	PE1.3, PE1.5, PE2.3, PE3.6

Teaching Strategies

Lectures, tutorials and assessments in the course are designed to cover the core knowledge areas as well as the essential and additional needs of both undergraduate and postgraduate students. Accordingly, additional assignments and tutorial activities will be prepared to accommodate both groups. They do not simply reiterate the texts, but build on the lecture topics using examples and cases taken directly from industries to show how the theory is applied in practice and the details of when, where and how it should be applied. Lectures and Tutorials are designed to develop several graduate attributes by creating an environment where information sharing, discussions, team work, communication, task completions will take place. Since each of you may have come from a different professional and academic background, your experiences are drawn on to illustrate various aspects of cases covered, and this helps to increase motivation and engagement. A team of students may be assigned to projects/assignments. Regular feedback and discussion on the topics covered aim to support students' learning process.

Assessment

Assessment task	Weight	Due Date	Course Learning Outcomes Assessed
1. Assignment 1	30%	Week 4, 14 March 2021	1, 2, 3, 4
2. Assignment 2	30%	Week 8, 4 April 2021	1, 2, 3, 4
3. Assignment	40%	Week 11: 25 April 2021	1, 2, 3, 4

Assessment 1: Assignment 1

Start date: Week 3, 28 February 2021

Due date: Week 4, 14 March 2021

Deadline for absolute fail: 19/03/2022

Marks returned: 28/03/2022

This assignment allows students to demonstrate applied knowledge by using Porter's model for a given industry case covered in Units 1-4.

Assessment criteria

A detail assessment criteria will be provided on Moodle together with the assignment prior to release date.

Additional details

A detailed description of the assignment and a marking rubric will be uploaded on Moodle.

Assessment 2: Assignment 2

Start date: Week 6, 21 March 2021

Assessment length: Maximum 4000 words

Due date: Week 8, 4 April 2021

Deadline for absolute fail: 09/04/2022

This assignments allows students to demonstrate applied knowledge in the light of the relevant material covered in Units 5-8 (specifically, core competency, capacity strategy, and the experience curve).

Assessment criteria

A detail assessment criteria will be provided on Moodle together with the assignment prior to release date.

Additional details

A detailed description of the assignment and a marking rubric will be uploaded on Moodle.

Assessment 3: Assignment

Start date: Week 9: 11 April 2021

Due date: Week 11: 25 April 2021

Deadline for absolute fail: 30/04/2022

This assignment allows students to demonstrate applied knowledge in the light of entire material covered in Units 1-10 in order to develop a strategic plan.

Assessment criteria

A detailed description of the assignment and a marking rubric will be uploaded on Moodle.

Additional details

A detailed description of the assignment and a marking rubric will be uploaded on Moodle. The deadline for absolute fail is 5 days from the submission, 20% deduction per day as defined by the UNSW late submission policy.

Attendance Requirements

Students are strongly encouraged to attend all classes and review lecture recordings.

Course Schedule

[View class timetable](#)

Timetable

Date	Type	Content
O-Week: 7 February - 11 February	Reading	Students should read the course outline and the course requirements to prepare themselves for the term. It is strongly recommended to have access to the reading materials and lecture notes.
Week 1: 14 February - 18 February	Lecture	The nature and role of manufacturing strategy
Week 2: 21 February - 25 February	Lecture	Porter's Model and the Value Chain
Week 3: 28 February - 4 March	Lecture	Competitive Positioning
Week 4: 7 March - 11 March	Lecture	Product Technology and Process Choice
Week 5: 14 March - 18 March	Lecture	Process Positioning and Core Competencies
Week 6: 21 March - 25 March	Lecture	Capacity Strategies
Week 7: 28 March - 1 April	Lecture	Focused Manufacturing
Week 8: 4 April - 8 April	Lecture	Experience Curve, Efficiency and Productivity
Week 9: 11 April - 15 April	Lecture	Global Manufacturing and the Extended Enterprise
Week 10: 18 April - 22 April	Lecture	Strategy Formulation, Implementation, and Linking Performance to Manufacturing Strategy
Study Week: 25 April - 28 April	-- Select --	

Resources

Prescribed Resources

- Kara, S., Strategic Manufacturing Management, 2022 Edition
- Lecture slides and reading handouts

Recommended Resources

Relevant readings are provided at the end of each unit on Moodle. However, further readings can be found in journals such as Harvard Business Review, Long Range Planning, Management Decision, Management Review, Journal of Management Studies, Californian Management Review, Sloan Management Review. These can be accessed via the UNSW Library <https://www.library.unsw.edu.au/>

UNSW Library website: <https://www.library.unsw.edu.au/>

Moodle: <https://moodle.telt.unsw.edu.au/login/index.php>

Course Evaluation and Development

Feedback on the course is gathered periodically using various means, including the UNSW myExperience process, informal discussion in the final class for the course, and the School's Student/Staff meetings. Your feedback is taken seriously, and continual improvements are made to the course based, in part, on such feedback.

In this course, recent improvements resulting from student feedback include changing the assessment structure, designing new assessment criteria and rubric. In addition, markign will be done by the lecturer.

Laboratory Workshop Information

There will be tutorials and demonstrations on selected weeks which will be announced on Moodle.

Submission of Assessment Tasks

Assessment submission and marking criteria

Should the course have any non-electronic assessment submission, these should have a standard School cover sheet.

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.

Marking guidelines for assignment submissions will be provided at the same time as assignment details to assist with meeting assessable requirements. Submissions will be marked according to the marking guidelines provided.

Late policy

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, for a minimum of zero marks.

The late penalty is applied per calendar day (or part thereof), including weekends and public holidays, that the assessment is overdue.

Work submitted after the 'deadline for absolute fail' is not accepted and a mark of zero will be awarded for that assessment item. For example:

- Your course has an assessment task worth a total of **30 marks (Max Possible Mark)**
- You submit the assessment **2 days after the due date**
- The assessment is marked as usual and achieves a score of **20 marks (Awarded Mark)**
- The late policy is applied using **Late Mark = Awarded Mark - (Days*Penalty per Day)*Max Possible Mark**. Your adjusted final score is **8 marks** ($20 - ((2*0.2)*30)$).

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:

1. Weekly online tests or laboratory work worth a small proportion of the subject mark, or
2. Online quizzes where answers are released to students on completion, or
3. Professional assessment tasks, where the intention is to create an authentic assessment that has an absolute submission date, or
4. Pass/Fail assessment tasks.

Examinations

You must be available for all quizzes, tests and examinations. For courses that have final examinations, these 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

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.

UNSW now has a [Fit to Sit / Submit rule](#), which means that if you attempt 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 information on UNSW's [Special Consideration page](#).

Please note that students will **not** be required to provide **any** documentary evidence to support absences from any classes missed **because of COVID-19 public health measures such as isolation**. UNSW will **not** be insisting on medical certificates from anyone deemed to be a positive case, or when they have recovered. Such certificates are difficult to obtain and put an unnecessary strain on students and medical staff.

Applications for special consideration **will** be required for assessment and participation absences – but no documentary evidence **for COVID-19 illness or isolation** will be required.

Special Consideration Outcomes

Assessments have default Special Consideration outcomes. The default outcome for the assessment will be advised when you apply for Special Consideration. Below is the list of possible outcomes:

Outcome	Explanation	Example
Time extension	Student provided more time to submit the assessment	e.g. 1 more week of time granted to submit a report
Supplementary assessment	Student provided an alternate assessment at a later date/time	e.g. a supplementary exam is scheduled during the supplementary exam period of the term
Substitute item	The mark for the missed assessment is substituted with the mark of another assessment	e.g. mark for Quiz 1 applied also applied as mark for Quiz 2, meaning if a student achieved a mark of 20/30 for Quiz 1 and was granted Special Consideration for Quiz 2, a mark of 20/30 would be applied for Quiz 2, etc
Exemption	All course marks are recalculated excluding this assessment and its weighting	e.g. The course has an assessment structure of: - Assignments 30%, - Lab report 30%, - Final Exam 40%. If the Lab report is missed and student is granted Special Consideration, then the assessment structure may be reweighted as follows: - Assignments 50% - Final Exam 50% as though the Lab report did not exist
Non-standard	Course Coordinator is contacted for the outcome when special consideration is granted as the outcome differs on a case-by-case basis	e.g. typical for group assessments where time extension supplementary assessment could be granted to the group member, time extension could be granted to the whole group, etc. Clarify with your Course Convenor for

Academic Honesty and Plagiarism

UNSW has an ongoing commitment to fostering a culture of learning informed by academic integrity. All UNSW students have a responsibility to adhere to this principle of academic integrity. Plagiarism undermines academic integrity and is not tolerated at UNSW. *Plagiarism at UNSW is defined as using the words or ideas of others and passing them off as your own.*

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: student.unsw.edu.au/plagiarism. 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 fixed. However more serious instances in first year, such as stealing another student's work 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

Academic Information

Credit points

Course credit is calculated in Units-Of-Credit (UOC). The normal workload expectation for one UOC is approximately 25 hours per term. This includes class contact hours, private study, other learning activities, preparation and time spent on all assessable work.

Most coursework courses at UNSW are 6 UOC and involve an estimated 150 hours to complete, for both regular and intensive terms. Each course includes a prescribed number of hours per week (h/w) of scheduled face-to-face and/or online contact. Any additional time beyond the prescribed contact hours should be spent in making sure that you understand the lecture material, completing the set assignments, further reading, and revising for any examinations.

On-campus class attendance

****T1-2022 UPDATE****

Public distancing conditions must be followed for all face-to-face classes. To ensure this, only students enrolled in those classes will be allowed in the room. No over-enrolment is allowed in face-to-face classes. Students enrolled in online classes can swap their enrolment from online to on-campus classes by Sunday, Week 1. Please refer to your course's Microsoft Teams and Moodle sites for more information about class attendance for in-person and online class sections/activities.

Your health and the health of those in your class is critically important. You must stay at home if you are sick or have been advised to self-isolate by [NSW health](#) or government authorities. Current alerts and a list of hotspots can be found [here](#). **You will not be penalised for missing a face-to-face activity due to illness or a requirement to self-isolate.** We will work with you to ensure continuity of learning during your isolation and have plans in place for you to catch up on any content or learning activities you may miss. Where this might not be possible, an application for fee remission may be discussed. Further information is available on any course Moodle or Teams site.

In certain classroom and laboratory situations where physical distancing cannot be maintained or there is a high risk that it cannot be maintained, face masks will be considered **mandatory PPE** for students and staff.

For more information, please refer to the FAQs: <https://www.covid-19.unsw.edu.au/safe-return-campus-faqs>

Guidelines

All students are expected to read and be familiar with UNSW guidelines and policies. In particular, students should be familiar with the following:

- [Attendance](#)
- [UNSW Email Address](#)
- [Special Consideration](#)
- [Exams](#)
- [Approved Calculators](#)

- [Academic Honesty and Plagiarism](#)

Image Credit

Photo by Stephen Blake March 2017, Willis Annexe (J18) Thermofluids lab

CRICOS

CRICOS Provider Code: 00098G

Acknowledgement of Country

We acknowledge the Bedegal people who are the traditional custodians of the lands on which UNSW Kensington campus is located.

Appendix: Engineers Australia (EA) Professional Engineer Competency Standard

Program Intended Learning Outcomes	
Knowledge and skill base	
PE1.1 Comprehensive, theory based understanding of the underpinning natural and physical sciences and the engineering fundamentals applicable to the engineering discipline	
PE1.2 Conceptual understanding of the mathematics, numerical analysis, statistics, and computer and information sciences which underpin the engineering discipline	
PE1.3 In-depth understanding of specialist bodies of knowledge within the engineering discipline	✓
PE1.4 Discernment of knowledge development and research directions within the engineering discipline	
PE1.5 Knowledge of engineering design practice and contextual factors impacting the engineering discipline	✓
PE1.6 Understanding of the scope, principles, norms, accountabilities and bounds of sustainable engineering practice in the specific discipline	
Engineering application ability	
PE2.1 Application of established engineering methods to complex engineering 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	
Professional and personal attributes	
PE3.1 Ethical conduct and professional accountability	
PE3.2 Effective oral and written communication in 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	✓