



Course Outline

Semester 1, 2015

Never Stand Still

Faculty of Engineering

School of Mechanical and Manufacturing Engineering

MANF6860

STRATEGIC MANUFACTURING MANAGEMENT

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COURSE OUTLINE

MANF6860 STRATEGIC MANUFACTURING MANAGEMENT

1. STAFF CONTACT DETAILS

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2. COURSE DETAILS

Units of credit

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

The UNSW website states “The normal workload expectations of a student are approximately 25 hours per semester for each UoC, including class contact hours, other learning activities, preparation and time spent on all assessable work.”

For a standard 24 UoC in the session, this means 600 hours, spread over an effective 15 weeks of the session (thirteen weeks plus stuvac plus one effective exam week), or 40 hours per week, for an average student aiming for a credit grade. Various factors, such as your own ability, your target grade, etc., will influence the time needed in your case. Some students spend much more than 40 h/w, but you should aim for not less than 40 h/w on coursework for 24 UoC.

This means that you should aim to spend not less than about 10 h/w on this course, i.e. an additional 4 h/w of your own time. This should be spent in making sure that you understand the lecture material, completing the set assignments, further reading about the course material, and revising and learning for the examination.

There will be parallel teaching of MANF4450 – Strategic Manufacturing Management. The assessment scheme for these classes will be different based on the learning outcomes of the individual courses.

Summary of the course

This course introduces students the strategic aspects of manufacturing management, in terms of an analysis of the environment in which manufacturing companies compete. In particular, it explores the relation of manufacturing strategy to business, financial and marketing strategies.

Aims of the course

This course aims to provide an introduction to the strategic aspects of manufacturing management, in terms of an analysis of the environment in which manufacturing companies compete, the various dimensions of competitiveness, and how individual companies can maximise effective utilisation of their assets and hence increase their overall ability to compete.

Student learning outcomes

After studying this course, it is expected that the student should be able to

- understand the nature of manufacturing strategy and its relation to corporate strategy
- appreciate the different forms of competitive advantage a manufacturing company can seek
- understand the strategic implications of process choice, process positioning, manufacturing focus, and the experience curve
- appreciate the importance of developing a capacity strategy
- understand the new strategic trend in human resource management in manufacturing organisations
- develop a systematic plan for strategy implementation
- understand the different types of globalised manufacturing and their implications
- appreciate the importance of linking performance monitoring to manufacturing strategy

Graduate attributes

UNSW's graduate attributes are shown at

<https://my.unsw.edu.au/student/atoz/GraduateAttributes.html>

UNSW aspires to develop graduates who are rigorous scholars, capable of leadership and professional practice in a global community. The university has, thus, articulated the following Graduate Attributes as desired learning outcomes for ALL UNSW students.

UNSW graduates will be

1. Scholars who are:
 - (a) understanding of their discipline in its interdisciplinary context ✓
 - (b) capable of independent and collaborative enquiry ✓
 - (c) rigorous in their analysis, critique, and reflection ✓
 - (d) able to apply their knowledge and skills to solving problems ✓
 - (e) ethical practitioners
 - (f) capable of effective communication ✓
 - (g) information literate ✓
 - (h) digitally literate

2. Leaders who are:
 - (a) enterprising, innovative and creative
 - (b) capable of initiating as well as embracing change
 - (c) collaborative team workers ✓

3. Professionals who are:
 - (a) capable of independent, self-directed practice ✓
 - (b) capable of lifelong learning
 - (c) capable of operating within an agreed Code of Practice

4. Global Citizens who are:
 - (a) capable of applying their discipline in local, national and international contexts
 - (b) culturally aware and capable of respecting diversity and acting in socially just/responsible ways
 - (c) capable of environmental responsibility

✓ = Developed in this course

In this course, you will be encouraged to develop graduate attributes 1(a), 1(b), 1(c), 1(f), 1(g), 2(c), and 3(a) by undertaking the selected activities and knowledge

content. These attributes will be assessed within the prescribed assessment tasks, as shown in the assessment table.

You will be supported in developing the above attributes through:

- (i) the design of academic programs;
- (ii) course planning and documentation;
- (iii) learning and teaching strategies; and
- (iv) assessment strategies.

3. RATIONALE FOR INCLUSION OF CONTENT AND TEACHING APPROACH

This course is intended to provide you with an introduction to manufacturing strategy. In particular, why strategy is important, how manufacturing strategy fits into the overall business context and the nature of manufacturing strategy. During the course of this semester we build a framework for strategy development and implementation in manufacturing, which is supported through case studies, including one major case.

The study of business strategy requires one to take a broad approach to business and the competitive environment. Successful students will look for options, question deeply, read beyond the course and come to conclusions and recommendations where the possibilities are open and the facts may be ambiguous.

Effective learning is supported when you are actively engaged in the learning process and by a climate of enquiry, and these are both achieved in the lectures and tutorials by way of practical case studies.

You become more engaged in the learning process if you can see the relevance of your studies to professional, disciplinary and/or personal contexts, and the relevance is shown in all parts of the lectures and assignments by way of examples drawn from industry.

Dialogue is encouraged between you, others in the class and the lecturers. Diversity of experiences is acknowledged, as some students in each class have prior marine experience. Your experiences are drawn on to illustrate various aspects, and this helps to increase motivation and engagement.

It is expected that assignments will be marked and handed back in the week following submission. You will have feedback and discussion, while the assignment is fresh in your mind, to improve the learning experience.

4. TEACHING STRATEGIES

The subject will be presented in the form of combined lectures and tutorials. Each weekly class will consist of a 1-1.5 hrs lecture followed by a tutorial example or case study related to the material covered in the lecture

5. ASSESSMENT

General

You are assessed by way of both examinations and an integrated case study which involve both descriptive material and industry-based case studies. These case studies test your ability to demonstrate applied knowledge, which you will be expected to perform as a postgraduate.

The assignments will contain questions of a practical as well as theoretical nature on any part of the material. The integrated case study is a group assignment, which requires students to demonstrate applied knowledge. While the details will be advised later, there will be a weekly tutorial for syndicates to prepare their case study presentations.

The weighting of the individual assessment components will be as follows:

Assignment 1:	30% (week 6)
Assignment 2:	30% (week 11)
Integrated Case study:	40% (week 13)

All assignments are to be uploaded via Turnitin in Moodle. Students should not submit if their assignment receives $\geq 15\%$ as a similarity score.

Assignments 1 and 2 are *individual* assignments, whereas the integrated case study will be a *group* assignment. You may form your own groups during the semester and these should be between 4-6 people. It is not possible to complete the assignment as an individual exercise nor is it permissible to have groups larger than 6.

Each assignment will be marked on the basis of your analysis of the question, ability to understand and apply the course material in a relevant and practical way and a demonstration that you understand the implications of your answer.

For individual assignments, your answers are expected to be around 1000 words (as a guide) and may also use figure or summary tables. Reading beyond the course material is highly recommended but must demonstrate additional insight into the course material.

The case study will be handed out in mid-semester and you should begin working on it immediately. As this is a case study, reading beyond the material might not be helpful – you should have all the material you need in the case. Like real business situations there will be missing data, ambiguous or superfluous information and it is your task to analyse the material as best you can. You will be required to prepare a report to me with your recommendations for the manufacturing strategy as though you were the company's Manufacturing Director. The report must be presented as a professional business report that demonstrates detailed analysis of the case, a practical use of the course framework and specific recommendations that are practical and realistic. As a guide, in the past these reports have been 40 – 70 pages including diagrams and tables. Remember that I have to read all reports, so brevity, structure and clarity are more important than report length.

Late submissions attract a penalty of one tenth of the assignment value per *day*, unless prior dispensation has been given; i.e. see the lecturer before the due date to avoid penalty. It is always worth submitting as, in the event of difficulty making the final grade, any late penalties may be removed.

Calculators (If necessary)

You will need to provide your own calculator, of a make and model approved by UNSW, for the examination. The list of approved calculators is shown at <https://my.unsw.edu.au/student/academiclife/assessment/examinations/Calculator.html>

It is your responsibility to ensure that your calculator is of an approved make and model, and to obtain an "Approved" sticker for it from the School Office or the Engineering Student Centre prior to the examination. Calculators not bearing an "Approved" sticker will not be allowed into the examination room.

Special Consideration and Supplementary Assessment

For details of applying for special consideration and conditions for the award of supplementary assessment, see *Administrative Matters*, available from the School office as part of *The Guide*, or on the School website.

6. ACADEMIC HONESTY AND PLAGIARISM

Plagiarism is using the words or ideas of others and presenting them 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 booklet which provides essential information for avoiding plagiarism: <https://my.unsw.edu.au/student/academiclife/Plagiarism.pdf>

There is a range of resources to support students to avoid 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. Information is available on the dedicated website Plagiarism and Academic Integrity website: <http://www.lc.unsw.edu.au/plagiarism/index.html>

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 a honours thesis) even suspension from the university. The Student Misconduct Procedures are available here: <http://www.gs.unsw.edu.au/policy/documents/studentmisconductprocedures.pdf>

Further information on School policy and procedures in the event of plagiarism is presented in a School handout, *Administrative Matters*, available on the School website.

7. COURSE SCHEDULE

All lectures in this course are given by Dr Bernard Kornfeld.

Tuesday 18:00–21:00

Central Lecture Block 6 (K-E19-103)

Date	Week	Topics
3/3	1	Unit 1: The Nature and Role of Manufacturing Strategy
10/3	2	Unit 2: Porter's Model and the Value Chain
17/3	3	Unit 3: Competitive Positioning
24/3	4	Cost Accounting Capital Investment Valuation
31/3	5	Unit 4: Product Technology and Process Choice
	-	Mid-session Break
21/4	6	Unit 5: Process Positioning and Core Competencies Assignment 1 due (30%)
28/4	7	Unit 6: Capacity Strategies
4/5	8	Unit 7: Focused Manufacturing
11/5	9	Efficiency and Productivity Unit 8: The Experience Curve
18/5	10	Unit 9: Global Manufacturing and the Extended Enterprise
25/5	11	Unit 10: Linking Performance to Manufacturing Strategy - 1 Unit 11: Linking Performance to Manufacturing Strategy – 2 Assignment 2 due (30%)
2/6	12	Unit 12: Strategy Formulation and Implementation
9/6	13	Assignment 2 due (40%) Integrated Case Study Presentations

8. RESOURCES FOR STUDENTS

A subject manual will be made available on Moodle. This manual includes all the necessary lecture materials and the readings at the end of each unit. Since the manual is regularly updated, the previous version of the manual is not recommended.

Suggested additional readings

Relevant readings are provided at the end of each unit. 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.

Additional materials provided in UNSW Moodle

TBA

Recommended Internet sites

None

9. COURSE EVALUATION AND DEVELOPMENT

Feedback on the course is gathered periodically using various means, including the Course and Teaching Evaluation and Improvement (CATEI) process, informal discussion in the final tutorial 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 a reduction in the number of assignments and the introduction of material on the influence of shallow water and squat on ship performance in lieu of further prediction methods. Other recent improvements include a re-arrangement of lecture material on gas turbines, and a re-wording of the assignment on gas turbines.

10. ADMINISTRATIVE MATTERS

You are expected to have read and be familiar with [Administrative Matters](#), available on the School website. This document contains important information on student responsibilities and support, including special consideration, assessment, health and safety, and student equity and diversity.

B. Kornfeld
February 2015