

MACQUARIE
UNIVERSITY



FACULTY OF
BUSINESS AND ECONOMICS

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BUS803

Strategic Operations Management

Semester 1 – 2010

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Course Objectives

Course Description

This unit examines the key issues currently facing all service and manufacturing organisations when creating the products and services. A primary aim of the unit is to illustrate the principles involved in effectively creating a value proposition and how the value transformation process is managed in the organisation and across the value chain. The unit will also examine the strategic contribution that operations management can make to the organisation's long term success. After placing the activities required of the operations manager into a conceptual framework, the practical issues and difficulties in making operations decisions are examined. Included are the areas of product design conversion processes for making goods and services, planning and control, quality management, the impact of e-commerce on operations, supply chain management, benchmarking processes and improvement activities

Course Objectives

Operations Management is a field of study that has changed in many important ways during the last two decades. I will certainly do my best to offer you a rich and diverse set of perspectives to this field, and will be happy to talk to you if you have any personal interest in deepening your understanding of some of the topics we will cover. Given the limited number of sessions, we cannot expect to cover each topic in all its depth. Students who are interested in a particular industry are encouraged to select it as the subject of their final project (see below).

This course will focus on a selected list of topics within the range of what is called today "operations and technology management". As I hope you will learn during the class, there is a very important link between an organisation's strategy and its operations and technology. Indeed, much of what constitutes competitive advantage is often leaning on mastering operations and the correct selection and use of competing technologies. You have probably heard many times that "strategy implementation" is much more difficult than strategy "formulation": Being able to deliver advantage is the factor that sets organisations apart. An outstanding management of operations and technology is often at the heart of such ability to deliver advantage and implement strategy.

The objective of this course is to provide an understanding of the management of the operations in all organisations, and their impact on the other areas within the organisation and across strategic business networks.

The basic objectives of this course are:

- To develop an appreciation of the key issues currently facing the manager of an operational functional area.
- To gain an insight into the appropriate means of applying process based concepts and operational tools and techniques.
- To develop an ability to interrelate the impact of developments made in the operations area with other functional areas and with overall corporate strategy.

In particular, this course aims to assist you to do the following:

- Understand the strategic role and objectives of operations:
 - How performance objectives will have different priorities depending on the organisation's customers, competitors and the position of its products and services in their life cycle;
 - Notion of strategic agility

- Manage the design activity, e.g., the stages which are involved in designing any product, service or process
- Examine existing process and information flows of business units to enable identification of bottlenecks, problem areas and activities and paths that could be rationalised or improved (This involves an understanding of what the process does, choice of equipment and technology, capacity of process steps, tasks required of workforce, as well as a depiction of the channels of communication between different hierarchical or functional levels of a business unit).
- Understand the fundamentals of operations planning and control:
- Understand the concept and implications of supply chain management especially in the global context
- Apply the principles of just-in-time for both services and manufacturing.
- Be instrumental in improving practices and performances in organizations:
- Understand the management of a broad range of initiatives through lean implementation and TQM approaches
- Apply the tools of best practice, e.g., performance measurement and improvement (the examination of critical success factors and key performance indicators) and different methods of benchmarking
- Examine the management of technology and innovation in organisations, i.e., the change management process in the adoption and implementation of “hard” and “soft” technologies
- Understand operations challenges in a global environment.

Course Philosophy

This course is not intended to make students subject matter experts in what is a complex and dynamic area of modern business. Rather, it will provide students with sufficient requisite information to understand the principles involved and their interrelationships, together with some guidelines as to how one might better learn how to learn and therefore perform more effectively. A number of topics under the umbrella concept of the 'value chain' are introduced within a context of operations strategy, which covers a broad range of interdependent areas of concern for those working within or managing modern commercial and non-commercial enterprises.

Participants are expected to take full responsibility for managing their own learning, just as they must take responsibility for managing their own careers. This means that your results for this course will in all likelihood reflect the quality of your efforts to come to grips with the principles involved and your understanding of how they might be applied in real-world situations. As many of the situations covered by this subject are problematic (that is, involving both quantitative and qualitative analysis), there will be few if any precise answers, because even the underlying assumptions used in quantitative tools are imperfect. Every option will have advantages and disadvantages with implications and strategic ramifications for both action and inaction. Understanding the underlying principles, their theoretical basis and, more importantly, how they may be applied in practice so as to achieve sustainable improvements on the present situation, should be a key objective for participants in this course.

Textbook

Participants will be expected to read widely and develop their general research skills (not just use the Internet). Many of the issues covered in the topics can be found in business or academic Journals, newspapers and or business periodicals such as the Asia Wall Street Journal, Far East Economic Review, Australian Financial Review, Business Review Weekly, Sydney Morning Herald, The Age, The Australian, etc. A good starting point to source articles is the reference section of relevant journal articles.

The compulsory textbook for this unit is:

**Slack, N, Chambers, S and Johnston, R,
Operations Management**

Pearson Education, 5th edition. 2006, ISBN: 0273708473

See also <http://www.booksites.net/slack>

In support of the lecture materials a selection of additional readings will be made available to the students. These articles represent a *starting point* for reading and research for each lecture topic and will be provided in accordance with the lecture needs. You will need to consult additional reference material to satisfactorily complete the assignments due in this unit.

Additional Readings

The following additional readings supplement the text book and will be provided :

Course Notes Class 1:

Hall, R.W (2000) "Distributed Excellence and the Dell Model", *Association for Manufacturing Excellence*, Target Vol 16, Number 2

Sull D and Turconi S (2008) "Fast Fashion Lessons" *Business Strategy Review* Summer 2008

Course Notes Class 2:

Smith, Preston G : Fast Cycle Product Development , *Engineering Management Journal* v2 n2 June 1990.(Note: A Classic)

Gerst R. (2004) "The Little Known Law", *Six Sigma Forum Magazine* (February 2004)

Course Notes Class 3:

Shapiro B.P, Rangan V.K, Sviokla J.J (1992) "Staple yourself to an order" *HBR* (July –August 1992) (Note : A HBR Classic!)

Course Notes Class 4:

Buchanan M,(2005) "Supermodels to the Rescue", *Strategy and Business Magazine* Issue 38

Course Notes Class 5:

Lee H, Padmanabhan V, Whang S., "The Bullwhip Effect in Supply Chains", *Sloan Management Review* , Vol. 38, No. 3, pp. 93–102

Narayanan V.G and Raman A (2004) "Aligning Incentives in the Supply Chain" *HBR* (November 2004)

Course Notes Class 6:

Bhatia,N Drew J. (2006) "Applying lean production to the public sector" *McKinsey Quarterly* (June 2006)

Course Notes Class 7:

Nolan T.W and Provost L.P (1990) "Understanding Variation" *Quality Progress* (May 1990) (Note : A classic on variation in systems)

Lecture Schedule

Classes will be held during Semester 1 , beginning on Wednesday 24th February, 2010. Classes will be held every Monday as listed below, from 11.00 am to 2:00 pm. In general, material will be introduced by way of presentation, discussion of the set readings, and the use of demonstration activities and games.

Class	Date	Topic	Content)	Readings	Class Activities	Assessment Due
1	24th Feb	INTRODUCTION	Operations management; The strategic role and objectives of operations; Operations strategy	Slack et. al. Ch 1,2,3	Class Participation	
2	3rd Mar	DESIGN	Process design; The design of products and services Supply network design; Layout and flow Process technology Job design and work organization	Slack et. al. Ch 4,5	"MQU-ROVER"	
3	10th Mar			Slack et. al. Ch 7,8,9	Class Participation	Newshound Group1
4	17th Mar	PLANNING AND CONTROL	The nature of planning and control Capacity planning and control Inventory planning and control Supply chain planning and control	Slack et. al. Ch 10,11,12	Class participation "Inventory Game"	Newshound Group2
5	24th Mar			Slack et. al. Ch 6,13	Class Participation "BEER GAME"	Newshound Group 3
6	31st Mar			Slack et. al. Ch 6,13	Class Participation	Newshound Group 4
Mid Session Break						
7	21st Apr		lean operations and JIT	Slack et. al. Ch 15	Class Participation	Mid term exam Ch: 1, 4, 10, 15
8	28th Apr	IMPROVEMENT	Quality planning and control	Slack et. al. Ch 17	RED BEADS" Class Participation	Newshound Group5
9	5th May		Project planning and control	Slack et. al. Ch 16	Class Participation "Project Management Game"	Newshound Group 6
10	12th May		Operations improvement	Slack et. al. Ch 18	Class Participation	Newshound Group 7
11	19th May		Making improvement - the TQM approach	Slack et. al. Ch 20	Class Participation	Wk 11 -Individual Assignment due
12	26th May					Wk 11 &12 Group Presentations Wk 12 Group written submissions
13	2 nd June					Final Exam

Syndicate Groups

Participants will be allocated to syndicate groups for class presentations on the first day of class. Working in a syndicate group fulfils several teaching objectives:

- intra and inter-enterprise relationships are affected by group dynamics. Syndicates provide a mini environment for participants to observe and cope with these phenomena as they develop in your group during your time together;
- in real organisational life, we are frequently assigned to work groups and have to learn to develop strategies for dealing with the interpersonal behaviour in the group. The syndicate group gives you an opportunity to hone or develop these skills in a 'non career-threatening' environment.

Remember - effective group results require effective group processes.

Course Requirements

Participants are required to review any assigned reading; prepare for and attend all classes; participate in class discussions; complete the assignments; and complete a final examination.

Participation is an important contribution to the success of the classroom experience. It is expected that participants will have completed at least the basic reading on each topic and have given some thought to the essential questions posed by the case studies that may have been selected for particular sessions.

(NB **80% attendance** at classes is a prerequisite to passing the course. Please contact the lecturer by email if you are unable to attend classes on a particular day or session.)

Course Assessment

The assessment system has been designed to help participants learn and apply the concepts introduced during the course. The purpose is to assess:

- the extent to which you understand the concepts, ideas and theories introduced;
- your ability to apply these concepts to your own experience;
- your ability to develop and support an argument in terms of the word limit required; and
- your ability to present information and ideas before an audience, and to be able to support the arguments presented.

Assessment Component	Weighting
Group Newshound and Class participation	10%
Individual Assignment	20%
Mid-term exam	5%
Group Submission (written report)	25%
Final exam	40%
Total	100%

Please note: Students will have to pass the final examination in order to pass the overall subject.

Assessment Details

Students are required to read all recommended text chapters and course notes.

Syndicate groups will be assigned in the first day of class and each syndicate group is required to make the following:

- A. One Newshound presentation
- B. One final project submission (written report and presentation)

PowerPoint presentations for all assignments prepared by each group (hard copies) should be made available to me at the beginning of the session when you are scheduled to present.

Each individual student will also be required to make the following:

- C. One mid-term exam
- D. One individual assignment submission
- E. One final exam
- F. Class attendance (minimum 80%) with appropriate participation and contribution

A. “NEWSHOUND”

Each syndicate group must prepare and present one “Newshound” presentation to the rest of the class. As “Newshounds” your task is to “sniff-out” a reasonably current (less than twelve months old) news item/article that has recently been reported in the business press, and relates to one of the topics that will be discussed in the week you are assigned to present. For example Group 1 will present in class 3 and therefore the news item/article must be relevant to product or process design.

You may search business newspapers and magazines from around the globe to find your story, but an emphasis should be placed on local publications if possible. Academic journals should not be used. In selecting your story you should put emphasis on practical issues that can bridge the divide between the theory covered in the text and readings and the application of this to the “real world”.

Your presentation to the class should be of approximately 20 minutes duration and may take whatever form and be creative as you like - PowerPoint, Q&A sessions, role play etc. The important aspects are to engage the class, relate the story and then link the theory. All group members have to present, and it will be assumed that all have played an equal role in the required aspects of preparation and presentation.

B. Final Project Submission (Written Report and Presentation)

You may use any industry/Sector that you like, however **each group must do a different industry/sector**, so therefore the first group to nominate an industry will be allocated to it. Examples of industry/sectors include:-

- The “information” or telecommunications industry
- Any FMCG or retail industry
- The medical or pharmaceutical industry
- The legal, financial or education services industry
- The automotive industry
- The hospitality industry
- Any other manufacturing or service industry/sector

The primary focus of the project should be on understanding how the value chain operations employed by enterprises within these industries creates value through effective management of intra and inter-enterprise relationships, the creative and innovative utilisation of current and emerging technologies, and the organisation’s interpretation of process and knowledge management. **You should aim to compare and contrast two or three companies that operate within the industry in terms of their application of the operations management theory discussed in this course.** Initially you should consider the industry value chain and then focus on the value chain of the organisations of your choice.

Typical issues for discussion will include (but should not be limited to) :

- What is the transformation process that occurs in the industry?
- How does the industry add value , via its value chain?
- How do different players compare in terms of the 4 V’s and their strategic objectives?
- What are the important design issues and how is the design process undertaken?
- How is capacity measured? How are capacity variations dealt with?
- What is the supply network and how is it designed. What are the major supply network issues?
- Does the industry have to deal with forecasting, planning and control issues and if so how is this done?
- Has the industry adopted lean and/or six sigma philosophies and if so how. If not how could it adopt these philosophies?

In limiting research to publicly available material (desk research using secondary sources), the objective is to demonstrate to students the wealth of available information, if one only knows how and where to look.

It is expected you will produce a practical report that relates the theory of the text to your chosen industry. The submission should be between 2,000 and 3,000 words, clearly argued and supported by the current theoretical literature. It must be referenced properly (using the Harvard Style of referencing) to indicate research as well as critical thinking skills.

The emphasis here is on participants developing or honing their skills at clearly and succinctly synthesising material from a variety of sources and expressing this in their own words, in written form. Reports should reflect the participant's own writing style and avoid the use of extensive quotations. Where direct quotations are unavoidable, they must be fully acknowledged (including page number). Finally, the report should be an interesting and informative read, providing useful insights for practicing managers.

C. Mid-term exam

There will be a 30 minute closed book mid-term exam held in class during class 7. The exam will be multiple choice / true-false type questions and cover chapters 1,4,10 and 15 of the textbook.

D Individual assignment submission

An individual assignment will be handed out in week 1. The assignment will comprise a number of short essay and quantitative questions relating to the material covered in chapters 1-17 of the text. Students are **encouraged to complete the questions progressively** as the theory is covered each week in class.

E. Final exam

There will be a 2-hour (closed text book) examination, **(40% of total assessment)** at the end of the unit (date to be advised) . There will be a 10 minutes allowance for reading the examination question paper. **It is to be noted that to pass the course you must obtain at least 50% marks in your final examination.**

Assessment Criteria

Referencing

References to other publications **must** be in Harvard style. Where articles have been accessed using the World Wide Web, referencing should comply with the Harvard style, but include the Access date together with the complete <URL>. If you are unsure how to reference other publications correctly, ask or find out, do not guess. Part of the assessment relates to your ability to correctly cite other publications in your work.

Submission Guidelines

All submissions are to be typed (Times New Roman or Arial font) 12 point and 1.5 line spacing on A4 paper with a 3.0-cm margin top, bottom and both sides, with a ragged right margin (that is, left justified). Submissions are to be stapled in the top left corner and are **not** to be bound or placed in plastic covers, etc. **Note:** Participants must attach the appropriate Cover Sheet to their assignment and complete and sign the certification. Papers without a correctly completed Cover Sheet with each student signature **may** be penalised and not be marked. A copy of the appropriate marking criteria must also be included, immediately behind the Cover Sheet.

Apart from the requirement to use Harvard style referencing within your submissions, all submissions should be to a standard you would be prepared to submit to the CEO of your enterprise. This will enable participants to develop skills in business writing where the ability to convey ideas or concepts clearly and concisely, is frequently lacking. It will also enable participants to draw together material from many sources and succinctly synthesise this material (whilst appropriately acknowledging their sources).

Individual and group assignments may only be handed in late with prior written (email) permission of the lecturer (don't come with a problem, come with a proposition that can be agreed upon, modified or rejected). Unauthorised late submissions will be penalised 20 per cent of the available marks and if more than seven (7) days late, will not be marked at all.

Marks will be awarded according to the following grading system:

GRADE	High Distinction	Distinction	Credit	Pass	Fail
%	85+	75-84	65-74	50-64	<50

Participants should be aware that their final mark and grade are subject to review, moderation and adjustment at the University's Examination Committee meeting.

Plagiarism

Plagiarism is the use of another scholar's work as your own. It includes not only the representation of an entire article or section in a paper, but also (most commonly) the paraphrasing or rearrangement of another's material without proper attribution. Summarising someone else's ideas and putting them in your own words does **not** free you from the obligation of acknowledging their work by way of appropriate citation and referencing. Failure to acknowledge material correctly is an offence against professional standards. It also breaches the 1997 Copyright Amendment Bill (Australia), which reinforces the right of authors to be cited for their work and for their work to be treated with integrity (not falsely represented as some 'cut-and-paste' jobs do). Plagiarism is not tolerated and attracts the direst penalties. At a minimum, participants who substantially plagiarise will receive a zero mark for their assignment.

Feedback and Evaluation

The student lecturer relationship is one of openness, trust and communication, whereby the lecturer continuously seeks input for improvements in scope, content and context, and the by the same token, students are expected to give constructive feedback so that they can be incorporated into the course program ASAP. This will benefit the students in being delivered what they expect out from the course and by the same token it gives the lecturer a mechanism to adapt and modify as per students needs.

Individuals and groups will receive progressive feedback from the lecturer on their performance in class, on an ongoing basis. Written feedback for the Individual and Group Essay will be provided at the time the assignments are returned back to students and for the actual Group Presentation a feedback will be provided after each presentation at a group level.

Questions not answered in the Outline and requests for extensions due to illness or exceptional circumstances, etc should be emailed to the lecturer. Apart from weekends, all communications should be answered within 24 hours.

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Criteria Used in Marking Written Group Project and Presentation

Group Number: _____

	Very High	High	Mod.	Low	Very Low
Research and Briefing Paper 75%					
Does paper coherently summarise the relevant theory relating to the chosen Industry/sector ?	10	8	6	4	2
Is there evidence of synthesis of ideas from the literature?	10	8	6	4	2
Does the importance/relevance of the theory to the industry/sector come across in the paper?	10	8	6	4	2
Are sources acknowledged (Harvard style)?	5	4	3	2	1
Does the document flow logically?	5	4	3	2	1
Is the standard of presentation appropriate for the (senior management) audience?	5	4	3	2	1
Have submission guidelines been followed?	5	4	3	2	1
PowerPoint Presentation 25%					
Do slides cover main points in logical flow?	5	4	3	2	1
Are slides to prompt presenter?	5	4	3	2	1
Is material presented in an interesting, informative way?	5	4	3	2	1
Is there evidence of preparation/rehearsal?	5	4	3	2	1
Is there evidence that the team knows its material thoroughly?	5	4	3	2	1
Does the team manage presentation timing?	5	4	3	2	1
Is the presentation geared at an appropriate (senior management) level?	5	4	3	2	1
Does the team handle questions effectively?	10	8	6	4	2
What is the overall impression given?	5	4	3	2	1

TOTAL _____ % _____ mark