

FUNDAMENTALS OF OPERATIONS MANAGEMENT

**Business Management 430
Spring 2004**

INSTRUCTOR:	Steven Dickstein	CLASS:	Tuesday/Thursday
TA:	Kevin Mohan		8:30 a.m. – 10:18a.m
			SB105

CONTACT INFO and OFFICE HOURS

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Tuesday & Thursday After class – 12:00 p.m.

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Monday & Wednesday 8:00 – 10:00 a.m.; other times & days by appointment

TEXT

Fundamentals of Operations Management, Fourth Edition, Davis & Aquilano & Chase, Irwin McGraw-Hill, 2003. ISBN 0-07-240285-7

Course Packet contains slides, supplemental readings, homework solutions, cases, and exam review outlines. Available at Cop-EZ, Tuttle Park Place (292-2219).

COURSE DESCRIPTION AND OBJECTIVES

Course Description

This survey course for non-business majors is designed to introduce fundamental processes of managing and controlling a variety of operations, covering both manufacturing and services. The course will focus on managerial issues, not simply quantitative analysis, and include the increasing relevance of global business trends.

Course Objectives

In 1962 two businesses began with similar names and business objectives. Over the years, one focused on marketing and promotion while the other, far less recognized, concentrated on operations issues. Today, Wal-Mart is the largest retailer in the world with 1.2+ million employees and annual sales of nearly \$250 billion. Its competitor and former industry leader K-Mart emerged from Chapter 11 in 2003, a much smaller and weaker company. Clearly, the growth and success of Wal-Mart cannot be attributed to a single issue alone, but their strategy demonstrates that **companies can achieve competitive advantage through their operations.**

The objective of this course is to introduce *how* operations contribute to the health of an organization. Some of the specific objectives include:

1. Understand the role of operations management in the overall business strategy of the firm (= strategic approach).
2. Understand the interdependence of operations functions with other, key functional areas of the firm (= tactical approach).
3. Review several of the tools available to evaluate operations techniques.

The teaching strategy will attempt to balance academic, “textbook” learning with actual business applications. For this reason, the student will get the most practical benefit from this material by staying current with business periodicals such as the Wall Street Journal, Business Week, Fortune, and/or various online resources.

EVALUATION

Your course grade will be determined in the following way:

Midterm Exam	35%
Final Exam	35%
Plant/Facility Tour	15%
Case	<u>15%</u>
TOTAL	100%

Grades will be posted on WebCT.

EXAMS

- The exams are closed book, closed notes.
- Formula sheets, if applicable, are provided on the exams.
- Each exam will be a combination of conceptual questions and problem solving. The material could be based on anything covered in the lecture, text, other assigned readings, video, or guest presentations.
- Each student must bring his own calculator and writing instruments. Sharing of materials is prohibited.
- **NO MAKE-UP, LATE OR EARLY EXAMS WILL BE GIVEN**, except in the case of medical emergency. Business related absences are not excused. Students should make arrangements now to avoid time conflicts.
- The exams are **90 minutes** in length. They are NOT comprehensive.
- The exams are to represent only the work of the individual student. No outside assistance (discussion with peers, cheat sheets, etc.) is permitted. See below for discussion on academic misconduct.

TOUR & CASE

A group approach to problem-solving is increasingly common to many careers. Collaboration may be required across different functional disciplines and/or among geographically and culturally diverse personnel. To duplicate, as best as possible, this experience within the course, a team effort is required for both the assigned case and plant/facility tour. Teams must comprise a minimum of three and a maximum of five individuals and submit one paper per assignment. **NO SINGLE SUBMISSIONS WITHOUT PRIOR PERMISSION.**

The purpose of these assignments is to provide the student with an opportunity 1) to communicate his/her analysis of a situation in a clear and professional manner, 2) to learn effective team-working skills to analyze and solve a

business problem. Both assignments can be found in the supplemental packet. See the Course Outline for due dates; no late reports will be accepted

PLANT/FACILITY TOUR

This course is intended to provide a practical, rather than theoretical approach to operations. This assignment is designed for you to link topics covered in the course to an actual business. It must be accomplished by an actual, on-site tour. Prepare a three page, double-spaced summary of your “tour” covering the questions identified in the packet Appendix.

CASE- Content Guidelines

- Assume that the reader knows the basic facts of the case. They do not need to be repeated.
- Apply what you have learned in this course. Consider ideas from the lectures, textbook, videos and articles.
- Address each question in the text of the paper. Suggestions on how to address each question:
 1. Understand the problem
 2. Brainstorm for alternatives
 3. Analyze the alternatives from both a quantitative and a qualitative point of view
 4. You may also want to discuss the alternatives you did not chose and why.

Note: There are many benefits to debating with your team regarding the various viewpoints of the case. Work with the different viewpoints to develop a more comprehensive analysis.

- Exhibits are strongly encouraged. Be creative. The benefits are:
 1. They help students organize their thoughts.
 2. They permit students to apply what they have learned in class.
 3. They quickly provide the instructor with an overview of the students’ level of understanding.
 4. They permit the students to concisely provide details of their analysis without detracting from the main message of their report.
- Teamwork can be challenging. Recognize that each individual will bring different strengths to the team. Use it to your advantage.

CASE- Format Guidelines

- Papers are to be concise, grammatically correct and free of spelling errors.
- Papers should be composed on word processing software and printed in an easily readable form.
- Each report should be a **MAXIMUM OF 3 PAGES**, double spaced, 12-point font with normal margins. A maximum of 3 exhibits may be appended and should be referred to within the text.
- Exhibits based on mathematical calculation should include a footnote with the formula(s).
- Discussion of assignments with any student either in your class or not in your class, with the exception of students in your case study group, constitutes two types of academic misconduct (1) unauthorized collaboration; (2) giving and/or receiving aid in an unauthorized manner. See section on Academic Misconduct for further discussion.
- Use a cover page that includes the names of all team members, the date, and the assignment title.

PEER EVALUATION

The last page of this syllabus is a mandatory form to evaluate the burden-sharing among your team. It is confidential and must be submitted by June 2 from each team member individually. The results may be used to adjust grades for the two team assignments.

ACADEMIC MISCONDUCT

Any material submitted for course credit must be your work if it is an individual-based assignment, or the work of your team if it is a group-based assignment. Students are not permitted to discuss/read/etc. the work/thoughts/ideas regarding the case or exams with other students (or another team for case work). If outside references are used, they must be properly referenced. Also, with the case work, it is recommended that you take action to protect your work, such as collecting your materials from the lab printers and disposing of rough drafts at home.

Procedures:

1. Suspected cases of academic misconduct will be reported to the University Academic Misconduct Committee.
2. Typical penalties include an E in the course and disciplinary probation for a first offense and dismissal from the University for a second offense.

OTHER

If you need an accommodation based on the impact of a disability, please arrange an appointment with me as soon as possible. We need to discuss the course format and your individual needs. I rely on the Office of Disability Services for assistance in verifying need and in developing accommodation strategies.

Although this course is being offered in a large section, I hope to create a more personalized experience through in-class discussions, real-world examples, and a case approach that many of the smaller Fisher College of Business courses employ. Please feel free to ask questions and to participate during class. I hope to provide both a stimulating and fun environment for BM430; please feel free to contact me or to stop by if I can help in any way.

KEY DUE DATES

Facility Tour – April 27

Bose Case – May 25

Peer Evaluations – Between May 25 and June 1

Papers are due AT THE BEGINNING OF CLASS on the due date

COURSE OUTLINE

This schedule is a guideline only for our progress. Although articles, videos and in-class discussions may be added or changed, every attempt will be made to hold to this schedule for graded events. “SP” refers to the supplemental packet.

COMPETITIVENESS & OPERATIONS

Date	Topic	Reading Assignments
3/30	Course Introduction & Overview of Operations Management Emergence of Operations Management (OM) Interdepartmental Relationships OM for Manufacturing and Services OM and the Global Economy	Chapter 1
4/1	Operations Strategy as a Tool of Corporate Goals Corporate Mission Statement Operations Strategies & Core Competencies Competitive Priorities Linking Priorities to Strategy Operations Role Video – An Historical Odyssey	Chapter 2
4/6	Operations Strategy as a Tool of Corporate Goals Applications of Competitive Priorities, Strategies Article – Manufacturing Competitive Priorities:… Video – Process Choice	SP-In class discussion
PROCESSES		
4/8	New Product and Service Development Developing New Products, Services Case – The Best Engineered Part is No Part Process Choice and Process Design	Chapter 3 Text, page 81
4/13	Quantitative Tools Project Management Breakeven Analysis Measurement Tools	Ch 3, Supplement 3, page 94-99 Ch 5, Supplement 5, pages 183-184 and 187-191 Practice Problems 1 & 2, page 208
4/15	Process Measurement & Analysis Process Analysis- Manufacturing & Services Measurement Tools Benchmarking Process Improvement vs Re-engineering	Project Management Practice Problem 1, Page 113 Chapter 5

4/20 **Quality Management**
Dimensions of Quality – Goods, Services Chapter 6- pages 218-231, 236-238
Cost of Poor Quality
What is TQM

4/22 **Quality Management (cont's)**
Control Tools Supplement 6, pages 248-253
Articles-Beyond the Tire Mess Pages 248-257
Ford has a problem with Quality SP
Case – Omit One at Bank One SP
Video- Quality at HP

FACILITY LOCATION & CAPACITY

4/27 **Facility Decisions** **Facility Tour paper due**
Facility Location – Manufacturing & Services Chapter 7, 288-300 and 304-309
Capacity Decisions & Strategies Text, page 320
Case- Community Hospital

HUMAN RESOURCES: ISSUES IN OM

4/29 **Changed Environment for Labor & Management**
Implementation Issues Chapter 10
Team Approaches
Job Design
Case – AT&T Credit Corp. Text, page 416
Midterm Review

5/4 MIDTERM EXAM

Supply Chain Management

5/6 A “Big Picture” Approach to OM
Supply Chain Factors Chapter 13
Integration Sample Problem (SP)
Transportation Factors
Disintermediation

5/11 Discussion – Sport Obermeyer SP
Midterm Exam Review

JUST IN TIME SYSTEMS

- | | | |
|------|---|--------------------------------|
| 5/13 | <p>Productivity Through JIT
Logic & Objectives
Benefits
JIT in Services</p> | Chapter 14 |
| 5/18 | <p>Case- XYZ Products
Article-Introducing JIT Manufacturing
JIT Video – Hewlett Packard (Table in SP)</p> | Text, page 566 (skip #3)
SP |

INVENTORY SYSTEMS

- | | | |
|-------------|---|---|
| 5/20 | <p>Independent Demand
Why Reduce Inventory?
Independent vs. Dependent
Inventory Systems – Quality Based or Time Based
Implications for Services
Practice Spreadsheet – Inventory System for Independent Demand</p> | <p>Chapter 16, 602-625
Problem 2, page 632</p> <p style="margin-top: 20px;">SP (Chapter 16)</p> |
| 5/25 | <p>Solution Spreadsheet – Inventory System for Independent Demand
ABC Analysis
Review Case</p> | <p>Case paper due
SP (Chapter 16)
Chapter 16, 626-628; prob 8, pg 492</p> |
| 5/27 | <p>Dependent Demand
Basic Issues
Video – Inventory and Text Books</p> | <p>Chapter 17, to page 646 only
Table in SP</p> |
| 6/1 | <p>MRP II
In-class problem (SP)
<u>(Note- In this section the packet will differ some from the text by including a POQ lot sizing rule).</u>
Course Evaluation</p> | <p>Chapter 17, 646-656
Final due date- Peer Evaluation</p> |
| 6/3 | <p>Final Exam Review</p> | |
| 3/16 | FINAL EXAM at | 7:30 a.m. |

PEER EVALUATION - GROUP PROJECTS

Your group has been given \$12,000 for each case as a consulting fee. Divide the money among your group based on the quality and effort of each team member's contribution. This evaluation is due to the instructor by June 1, and may be used to adjust case grades. Please justify your response only if an unequal valuation is assigned.

	Tour	Case
Your name: _____	_____	_____
Team members: _____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
	\$12,000	\$12,000

Discussion: