



**BA 502  
Spring 2007  
Operations Management**

**University of Washington Business School**

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**Office Hours: M-W 12:30-1:30 until May 2, 2007 or by appointment**

**Objective:** With the emergence of Global competition and the rise of Service economy, efficient purchasing, production and delivery of goods and services have become a vital part of the survival and success of every organization. This has become an increasingly critical managerial issue in the presence of more frequent introduction of new products, shorter product life cycle and more sophisticated and quality conscious consumers when competing in the global markets. Operations Management, by definition, deals with the study of such issues. In the Operations Management module, some important concepts and the state of the art techniques essential for managing an organization such as Process Flow Management, Inventory Management, Information Distortion and Demand Management, Supply Chain Management and Logistics are introduced. In summary, the mission of the module is to:

a) Introduce the students to the operational issues encountered in the production of goods and services and some of the available analytical approaches used to tackle them.

b) Familiarize the students with the role of Operations Management and its interactions with the other functional areas in business organizations.

**What to Expect from this module:**

I have taught this course for many years and strongly believe that most of the operational problems encountered in the real world require a deep understanding of the underlying economics and tradeoffs involved. This is what I have been observing through my extensive interactions with practitioners and recruiters who, ever increasingly, express their desire to have people with sound fundamentals and good analysis skills. This is how we will approach this course; that is, while we cover the strategic aspects of operations, we emphasize on teaching students to think critically and build the solid

quantitative foundation for analysis, which can be used to formulate the strategic plans. Needless to say, many past students have found this module as one of the most intellectually challenging courses in the core which, led them to taking more electives in operations during their second year of study (*i.e.*, OM 535: Project Management, OM 579: Supply Chain Management, OM 545: Logistics and Supply Chain Management).

**Class Notes and Selected Material:** Available at **Professional Copy ‘N’ Print. 4200 University Way N.E. (206)634-2689.**

The Course Package contains Lecture Notes, Case Studies, Problem Sets and additional Readings, which provides students with interesting related articles that have appeared in business magazines and newspapers as well as academic journals such as Harvard Business review and Sloan Management review.

**Course Web site:**

We will use Blackboard for posting announcements, course material not included in the course pack such as extra readings, spreadsheets and solutions to problem sets, case studies and exams. Most of these materials will be posted as we progress and can be found under *COURSE DOCUMENT* section of the course in Blackboard (<http://uwbs.blackboard.com/webapps/portal/frameset.jsp>).

**Required Text and Readings:**

M. Davis, Heineke, J.: Operations Management, Fifth Edition, McGraw-Hill Irwin, 2005  
Goldratt, E.M., and J. Cox, The Goal: A Process of Ongoing Improvement. North River Press, Croton-on-Hudson, N.Y., 1992.

**Attendance:** It is assumed that students will be present at all of the lectures. When absence is unavoidable, students should at least read and discuss the notes and contents of the missed session with one or more classmates.

**Performance Evaluation:** Module performance is approximately evaluated as follows:

Problem Sets	15 %
Midterm Exam	30 %
Final Exams	45 %
Class Participation	5 %
Case Studies Participation	5 %

**Problem Sets:** A number of problem sets will be assigned in order to provide the students with the opportunity to develop and apply the concepts and tools discussed in the lectures. Students are encouraged to work in their pre-assigned groups. Each group

should submit only one problem set for grading with the names of all members prominently displayed. All group members will receive the same grade for each problem set submitted. **No late homework will be accepted.** Although group participation is encouraged, however, it is critical that students study the problems in each of the problem sets independently and use their group interactions for clarifying and streamlining their analyses.

**Case Studies:** A number of case studies which may require the knowledge of some of the concepts developed in other functional areas such as Managerial Accounting, Statistics and Finance will be discussed in class. Students are required to prepare and analyze the cases (**expect cold calls!**).

**Topics:**

1. Introduction to Operations Management
2. Productivity, Competitiveness and Operations Strategy
3. Process Flow Analysis, Capacity Planning and Waiting Lines
4. Inventory Management and Supply Chain Analytics
5. Supply Chain Management and Logistics

## Reading Assignments

### 1. March 26 (Mon): Introduction, Productivity and Operations Strategy

**Read:** Chapters 1, 2 (Davis & Heineke).

Lecture Notes

a) **Start Reading The Goal. Finish it in a week.** The Book will provide you with an overview of some of the key challenges in the field. You will need the concepts introduced in the book to solve one of the problems in Problem Set #1.

b) Stalk *et al.*, “Competing on capabilities: The new rules of corporate strategy”.

### 2. March 28 (Wed): Process Flow Analysis

**Read:** Chapter 16 (Davis & Heineke).

Lecture Notes

a) Zipkin: “The Best Things in Life were free: On the technology and transactions,” *MSOM*, Fall 2006.

b) Maister,D. “The Psychology of Waiting Lines”.

c) Passariello: “Louis Vutton tries modern methods on factory lines,” *WSJ*, October 9, 2006.

### 3. April 2 (Mon): Time and Capacity Planning &Waiting Lines

**Read:** Supplement to Chapter 16 (Davis & Heineke).

Lecture Notes

### 4. April 4 (Wed): Time and Capacity Planning &Waiting Lines

**Read:** Lecture Notes

Gibson:” Merchants decide to Mull Lines; What’s the Long and the Short of it,” *WSJ*(9/3/1998).

Belenky & Larson: “To Queue or Not to Queue,” *OR/MS Today*-June 2006.

Morales & Geary: “Speed Kills: Supply Chain lessons from the War in Iraq,” *HBR* 11/2003.

**Due: Problem Set #1**

### 5. April 6 (Fri): Time and Capacity Planning &Waiting Lines

**Read:** See Previous session,

### 6. April 9 (Mon): Inventory Management

**Read:** 506-515 (Davis & Heineke)

Lecture Notes

Duff: "How Wal-Mart Outdid Once-Touted Kmart in Discount store Race," (WSJ, 3/24/95)

**7. April 11 (Wed.): Probabilistic Inventory systems**

**Read:** pp. 521-530 (Davis & Heineke)

Lecture Notes.

Raman & DeHoriatius: "The Achilles' Heel of Supply Chain Management," HBR 5/2002.

Narayanan: "How to Induce Retailers to reduce stockouts?" HBR 2003.

**Prep. For Class: Case: "Seattle Espresso Inc."**

**8. April 16 (Mon): Probabilistic Inventory systems.**

**Read:** Lecture Notes

Stauffer: "The weak Link in Your Supply Chain Management," Harvard Management Update, 2002

**Prep. For Class: Case: "Hydra Pump Inc.;"** (This case integrates concepts in Waiting Lines, Statistics and Finance)

**Due: Problem Set #2**

**9. April 18 (Wed): Midterm Exam**

**10. April 23 (Mon): Supply Chain Management**

**Read:** Chapter 4 (Davis & Heineke)

Lecture Notes

Feitzinger and Lee: "Mass Customization at Hewlett Packard: The Power of Postponement," (HBR, Jan./Feb. 1997).

Lee: "Aligning Supply Chain Strategies with Product Uncertainties," California Management Review, Spring 2002

**11. April 25 (Wed): Supply Chain Management**

**Read:** Lecture Notes

**12. April 27 (Fri): Supply Chain Management**

**The Beer Game:** Class will be broken into groups. Each group will play the game and present the results in the next session. Read the game rules and get familiarized with the game before the class

**Read: The Beer Game in the course Pack under Cases and Games section.**

**13. April 30 (Mon): Supply Chain Management**

**Beer Game Presentations** (prepare a 10 minute crisp presentation of the results)

**Due: Problem Set #3**

**14. May 2 (Wed): Supply Chain Management**

**Read:** Lecture Notes.

Fisher *et al.*: “Making Supply Meet Demand,”(HBR 1994).

Clark *et al.*: “Four Steps to Make RFID Work for You,”(HBR 2006).

**15. May 4 (Fri): Information Distortion and Demand Management**

**Read:** Lecture Notes

Fisher: “What is the Right Supply Chain for your Product,” HBR,  
Mar./Apr. 1997

Lee and Whang: “Information Sharing in a Supply Chain”

**Prep. For Class: Case: “Qual Print Inc”.**

**Due: Problem Set #4**

**FINAL EXAM: Monday, May 7, 2007**