Summer II 2005 70-371

Production and Operations Management

Instructor:
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Class meetings: 12:00pm – 1:20pm weekdays in Wean Hall 6423
Office Hours: Tuesday and Thursday 3-4 PM or by appointment.

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1. Course Description and Objectives

70371 is an introductory course to operations management that covers both production and services. The emphasis will be on the analysis and design of supply chains, which have led to the success of the pioneering companies such as Wal-Mart and Dell.

Supply chain management provides great opportunities for a wide range of careers in sourcing, logistics, production and inventory management, customer service, quality control, project management etc. The goal of this course is to help students develop the basic knowledge and skills that are useful in those careers and the ability to examine the interplay between operations and other functions such as marketing, accounting, finance, and information system. Students will learn both qualitative/strategic topics and quantitative analysis, and gain hands-on experience through cases from top business schools.

2. Textbook and Other Readings

[1] "Supply Chain Management (2nd edition)" by Sunil Chopra and Peter Meindl, published by Prentice Hall, ISBN 0-13-101028-X (Textbook), this book is available at the school bookstore.

[2] "Ford Motor Company: Supply Chain Strategy" by Robert Austin, Harvard Business School Case.

[3] "The Power of Virtual Integration: An Interview with Dell Computer's Michael Dell" by Joan Magretta, Harvard Business Review March-April 1998.

[4] "Hewlett-Packard: DeskJet Printer Supply Chain (A)" by Kopczak & Lee, Standford University Case.

[5] "Lufthansa Cargo AG: Capacity Reservation and Dynamic Pricing" by Rolf Hellermann and Arnd Huchzermeier, WHU case.

The textbook [1] will mainly be followed. Cases [2]-[5] will be discussed in class and/or used as background reading for case studies. Lecture notes and supplementary handouts will be available on the blackboard.

3. Grading

Your grade will comprise of the following components.

2 Cases (HP case, Lufthansa case)	20%
5 HW Sets	30%
5 Quizzes	10%
Final	35%
Participation	5%
Total	100%

1. **Case Reports** – There are two case reports. For each case, a series of questions will be posted on the blackboard and sent out when it is assigned. As a group, you are encouraged to discuss the case together. But for the written reports, the questions should be allocated to different people. A final written report is to put together the answers from each group member. Each group member will present the questions he/she is responsible for, in the class on the due date. If you find anything interesting or want to make additional comment, please include them in the report. Insightful thoughts will always be rewarded. THE EVALUATION IS BASED ON THE WRITTEN REPORT AND THE PRESENTATION.
2. **Homework Assignments –** There are five homework assignments. Homework assignments should be done individually. Collaboration is not permitted. You may discuss homework problems with the instructor. Homework will be announced in class or on the blackboard. Each assignment is due at the beginning of the class on the coming Wednesday.
3. **Final Exam –** Will be in-class. Detailed Information regarding the topics covered and format of the exams will be announced later in the timeline.
4. **In Class Participation –** The grading of the participation will be based on attendance and contribution. Contributions that add new insights or advance the discussions, including clarifying questions, will be rewarded. Discussions are essential in learning process and will make this class much more interesting and fun for all of us. Discussions do not have to be limited to class sessions only.
5. The academic integrity rule follows the general guideline of CMU.
6. NO LATE SUBMISSION OF CASE REPORTS OR ASSIGNMENTS WILL BE ACCEPTED.

Preliminary Schedule

This schedule is tentative and will be updated along the progress.
(Updated: July 18th, 2005)

Week	Date	Lecture Content	Homework Due
#1	June 27	Introduction to the course Chapter 1,2,3 - Introduction to supply chain	
	June 28	Chapter 1,2,3 - Introduction to supply chain	
	June 29	Chapter 7 - Demand Forecasting	
	June 30	Chapter 7 - Demand Forecasting	
	July 1	Review and Quiz: Understanding the Supply Chain (Dell and Ford)	
#2	July 4	Independence Day, no class	
	July 5	Chapter 10 - EOQ and Cycle Inventory	
	July 6	Chapter 10 - EOQ and Cycle Inventory	Hw #1
	July 7	Chapter 10 - EOQ and Cycle Inventory	
	July 8	Chapter 10 - EOQ and Cycle Inventory	
#3	July 11	Review and Quiz: EOQ	
	July 12	Chapter 11 - Managing Uncertainty: Safety Inventory	
	July 13	No class	
	July 14	Chapter 11 - Managing Uncertainty: Safety Inventory	Hw #2
	July 15	Chapter 12 - Determining Optimal Level of Product Availability	
#4	July 18	Introduction to Quality and Six Sigma	
	July 19	Review and Quiz: Stochastic Inventory Management	
	July 20	Chapter 15 – Pricing and Revenue Management	Hw #3
	July 21	Chapter 15 – Pricing and Revenue Management	
	July 22	Chapter 15 – Pricing and Revenue Management	
#5	July 25	Lufthansa case	Lufthansa case
	July 26	Review and Quiz: Revenue Management	
	July 27	Chapter 10.3,12.4,13.3,16- Supply Chain Coordination	Hw #4
	July 28	Chapter 10.3,12.4,13.3,16- Supply Chain Coordination	
	July 29	Review and Quiz : Supply Chain Coordination	
#6	August 1	Postponement and risk pooling (HP case)	HP case Hw #5
	August 2	Chapter 18 e-Business and the Supply Chain	
	August 3	Artificial Intelligence- based Scheduling (optional)	
	August 4	Review for final exam	
	August 5	Final Exam	

This schedule may be modified according to the course progress and your feedback.