

SCM 6A01: Production and Operations Management Fall 2015

C. T. Bauer College of Business, University of Houston
Department of Decision and Information Sciences

Instructor: Dr. Funda Sahin, Associate Professor of Supply Chain Management
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Class Time: SCM6A01-20798: 6:00-9:00pm, Monday, CBB 104
Office Hours: 4:15-5:30 pm, Monday & Tuesday and by appointment

Course Description

This course introduces the student to the concepts, issues and techniques used to plan, analyze and control operations for both production and service processes. The course addresses strategic and operational issues at both the enterprise and supply chain levels.

Course Prerequisites

Prerequisite: Admission to the C.T. Bauer MBA program.

Course Objectives

1. To develop an understanding of operation and supply chain systems: inputs, conversion processes, and outputs for both manufacturing and service environments.
2. To develop an understanding of the relationships among operations and supply chain, marketing, accounting, finance and engineering functions.
3. To develop student's ability to formulate and analyze operations and supply chain problems.
4. To develop a basic understanding of the nature of operations and supply chain managers' jobs.

Course Materials:

Course materials include a textbook, course notes, handouts and cases.

1. **Text:** *Operations and Supply Chain Management: The Core*, third edition, by F. Robert Jacobs and Richard B. Chase, McGraw-Hill Irwin, 2013. ISBN 978-0-07-352523-5.
2. Harvard Business Publishing Coursepack: <https://cb.hbsp.harvard.edu/cbmp/access/38272289>
3. Course lecture notes and handouts posted on blackboard.

Performance Evaluation

Grade components:

- Exam 1 35%
- Exam 2 30%
- Quizzes (count best 4 of 5) 15%
- In Class Performance and Homework 20%

Information about the Exams/Quizzes

1. **Exam Content:** The exams will cover all material from lectures, readings, videos, and study problems since the prior exam.
2. **Quiz Content:** There will be five quizzes. The four highest scoring quiz grades will be considered for the quiz grade component. While some quizzes will be announced, others may not be. Hence, the student should be prepared for a quiz over the assigned material for each day. Preparing notes on the discussion questions and working assigned problems will enhance your performance on the quizzes.
Exam/Quiz Format: All exams will be closed book and closed notes. The instructor will provide all mathematical formulas and statistical tables required for the exam. Exam formats are a balance of multiple-choice, short answer questions and problems. . If a quiz is missed due to illness, job related

reasons, job interview or any other circumstances), that quiz will count as the lowest quiz grade and will be dropped at the end of the semester.

3. **Homework:** Homework assignments emphasize the major learning elements of the course. There will be multiple analytics based assignments.
4. **Exam Materials:** The student must bring a calculator (no cell phones) to each exam.
5. **Make-Up Policy:** Exams/quizzes may not be missed at the convenience of the student. If an exam is missed due to an approved university absence, you must inform the instructor no later than 48 hours after the exam (before the exam if possible) to schedule a make-up. There will be no make-ups for missed exams without a university-approved excuse. Except under unusual circumstances, make-up exams will be held within 10 days of the original scheduled date.

In Class Performance: Professionalism /Participation/Advancing the Learning of Others: I view each class as a business meeting during which time we will discuss the assigned material and related topics. During these meetings, I look for evidence of your preparation and understanding of the class material. This can only be exhibited by your in class contributions. Of particular importance are those contributions that help advance the understanding of others. Class attendance alone does not represent participation. Each student is also expected to conduct himself/herself in a professional manner as expected of future business leaders. This includes respect for others, proper cell phone and computer etiquette, and timeliness among other factors.

General Information

1. **Office Hours:** I will have regularly scheduled office hours. If for some reason you need to meet at an alternate time, please contact me so we can schedule a time. You are encouraged to contact the professor at the first sign of any problem or lack of understanding. Do not wait until it is too late!
2. **Study Groups:** I strongly encourage students to form study groups for the course. This will provide a resource for information should you miss class, a venue for discussing assignments, and a study group for exams.
3. **Blackboard:** Course materials, announcements, grades or changes to the course outline will be posted on blackboard. It is the student's responsibility to check Blackboard before every class period for important announcements, class notes, emails, grades and changes to the course schedule.
4. **Academic Dishonesty:** Scholastic Dishonesty is defined as (1) Acquiring or attempting to acquire information from others (e.g., observing the work of others during an exam), (2) Providing others with information on quizzes/exams; (3) Plagiarism, (4) Conspiracy to commit any of the above, (5) Fabrication of information. The University of Houston honor code statement applies to all students in this class. For more information, see Bauer Academic Honesty on <http://www.bauer.uh.edu/current/academic-honesty.asp>. Any student caught providing or receiving assistance on an exam/quiz will immediately be given a grade of "F" for the course. ed) within the classrooms.
5. **Students with Disabilities:** Any student who feels s/he may need an accommodation based on the impact of a disability should contact the professor privately within the first two weeks of classes to discuss his/her specific needs. The student also needs to contact the Center for Students with Disabilities (contact information is below) within the first two weeks for coordinating accommodations.

Justin Dart Center for Students with Disabilities

CSD Building #568, Room #110; Phone: (713) 743-5400; TDD: (713) 749-1527

HAVE A GREAT SEMESTER!

Course Schedule

MODULE 1: OPERATIONS AND SUPPLY CHAIN STRATEGY

Aug 24 Course Overview

Read: Supply Chain Management Lecture Notes
Chapter 1: Operations and Supply Chain Management

Read: “Operations-Based Strategy”, California Management Review, Vol. 40, No.4, pp.8-25, Summer 1998.

Homework Assignment 1: Due August 31. Complete the Analytics Exercise: *Comparing Companies Using Wall Street Efficiency Measures* on page 22 of the text. Prepare a two page summary of your findings. The format is:

- List the companies and industry.
- Prepare a table with the comparative statistics of the companies
- Insights and Conclusions

Operations and Supply Chain Strategy

Read: Operations and Supply Chain Strategy Lecture notes
Chapter 2: Strategy and Sustainability

Discussion Question:

1. How do operations and supply chain strategy relate to marketing and finance?
2. What are the major competitive dimensions of operations strategy?
3. How do order winners and qualifiers relate to operations strategy?
4. What role does strategic fit play in evaluating a firm’s operations strategy?

Case: “IKEA” (posted on Blackboard), be prepared to discuss the questions at the end of the case.

Aug 31 Supply Chain Strategy and Operational Processes

Read: Chapter 6, pages 172-177, 180-184

Case: “The Tao of Timbuk2: on pages 43-44. Be prepared to discuss the questions at the end of the case.

Videos: <http://www.timbuk2.com/content/about-manufacturing.html>

<https://www.youtube.com/watch?v=tYyQpSI7TtQ>

Case: “Rapid Fire Fulfillment, Ferdows, Kasra; Lewis, Michael A.; Machuca, Jose A.D. *Harvard Business Review*. Nov2004, Vol. 82 Issue 11, p104-110.

1. Explain the key elements of Zara’s demand and supply integration strategy? How do they manage the customer decoupling order point to provide wide product variety within a short lead-time?
2. What could a company such as Levi Straus or Nike learn from Zara?

Supply Chain Strategy and Operational Processes: Service Systems

Case: “Benihana of Tokyo”, HBS#9-673-057

1. Examine the service system of Benihana of Tokyo. What are the flows? Where are the inventories held?

2. What are the key ingredients in Benihana's successful recipe? Compare Benihana's operating ratios with those of a typical restaurant.
3. What is the relationship between Benihana's marketing and operations strategies?

Sept 7 **Labor Day-No class**

MODULE 2: PROJECT MANAGEMENT

Sept 14 **Project Management: Overview and Critical Path Method**

Read: Chapter 5, Project Management
Project Management- Class Lecture notes

Homework Assignment 2: Due September 21 at the start of class. Work problems 2, 3, 4, 5, 6, 8 and 11 at the end of the chapter.

Project Management: Risk Management in Projects

Read: Normal Curve: posted on blackboard

MODULE 3: DEMAND & SUPPLY INTEGRATION

Business Forecasting

Read: Chapter 3, Forecasting pages 46-59, 69-72
Forecasting Class Lecture notes

Read: "Three Forecasting Building Blocks for Supply Chain Excellence", Chief Supply Chain Officer Magazine, November 2005.

Homework Assignment 3: Due date September 21 at the start of class. (posted on blackboard).

Sept 21 **Business Forecasting (continued)**

Read: Chapter 3, pages 75-79

Business Forecasting Qualitative Techniques in Forecasting

Read: Chapter 3, pages 75-79

Sept 28 **Examination 1**

Format: 75 minute duration with a mix of multiple choice, short answer, and problems. Bring a calculator to exam (cell phones cannot be used for calculators). Equations will be provided. Exam covers all material covered up to the day of the exam.

Inventory Management: Newsvendor and Order Point Systems

Read: Chapter 11 pp. 352-368
Inventory Lecture Notes

Homework Set 4: Due Date October 12 at the start of class. (posted on blackboard).

Oct 5 **Inventory Management: Safety Stock**
Read: Chapter 11, pp. 368-372, 375-383.
Inventory Lecture Notes

Inventory Management: Purchase Discounts and Policies.
Read: Chapter 11, pp. 375-383.

Oct 12 **Location, Logistics and Distribution**
Read: Chapter 14, pp. 450-471.

Case: AmazonFresh: Rekindling the Online Grocery Market, HBS#9-615-013

Social Responsibility and Sustainability

Video: The Story of Stuff. <http://storyofstuff.org/movies/story-of-stuff/>

Discussion Questions:

1. What undesirable aspects of supply chains do the videos highlight?
2. How should they be addressed?

Oct 16 **Examination 2**

Covers all course material since Examination 1. Format: 75 minute duration with a mix of multiple choice, short answer, and problems. Bring a calculator to exam (cell phones cannot be used for calculators). Equations will be provided.