

# Production and Operations Management

## SCM 6A01 Section 18768 – Summer 2015

**Professor:** Dale L. Tibodeau, D.Eng., P.E.

**Class Schedule:** 6:00 to 10:00 PM Wednesday's Room: Classroom and Business Building CBB 108

**Student Hours:** MH 275D Wednesday's 5:00PM – 6:00PM and by appointment.

**Office Phone:** 713.743.4691

**Mobile:** 713.502.5118

**Email:** [dltibodeau@bauer.uh.edu](mailto:dltibodeau@bauer.uh.edu)

### I. Course Description

Operations Management (OM) is the study of how organizations employ their resources to produce goods and services to satisfy customer demands. This business process is known as the supply chain, and the planning and control of this process is called Supply Chain Management (SCM). SCM brings together the areas of Marketing, Engineering, Accounting, Finance, MIS, Statistics, and General Management to solve problems so that the supply chain operates more effectively. Much of our work in this class will be focused on ways organizations use SCM principles to reduce cost, improve operational efficiency and achieve high levels of customer satisfaction across the supply chain. We will use practical examples to illustrate these principles.

### II. Course Objectives

The purpose of this course is to introduce students to the key concepts and strategies involved in designing and managing a supply chain. These principles apply to both service-oriented and manufacturing firms as well as governmental and non-profit organizations, and NGO's. By successfully completing this course students should be able to:

- articulate an understanding of operation and supply chain systems: inputs, conversion processes, and outputs for both manufacturing and service environments.
- articulate an understanding of the relationships among operations and supply chain, marketing, accounting, finance and engineering functions.
- formulate and analyze operations and supply chain problems.
- articulate a basic understanding of the nature of operations and supply chain managers' jobs.

### III. Course Textbook and Other Requirements

#### Required:

*Operations and Supply Chain Management: The Core*, F. Robert Jacobs & Richard B. Chase, 3<sup>rd</sup> ed.(2013)

ISBN 978-0-07-352523-5

Case studies from Harvard, Ivey and other business schools (see below)

#### Required:

##### Readings:

Various assigned and suggested readings from academic journals and other sources - see the course schedule. Available via UofH library system Supply Chain Management Webpage. Follow the link below, then click on *SCM Course Pages*; then choose *SCM 6301/6A01 Production & Operations Management (Tibodeau)*.

<http://guides.lib.uh.edu/scm>

To access the articles listed on the Supply Chain Management webpage or other University of Houston Libraries electronic resources a **CougarNet Login** is required. Please contact UH Campus IT at (713) 743-1411 or visit their website <http://www.uh.edu/infotech/>

**Assignments:** Homework, Readings and Case Studies are a vital part of this course. During the semester you will be assigned homework for which you will prepare both a written analysis.

**Case Studies:** the class will be assigned various case studies to prepare for class discussion.

The easiest (and least expensive) way to access the cases is through the course page I have created on the Harvard Business Online website and at the Ivey Publishing website. If you have not registered with Harvard Business Online or Ivey, you will be required to do so. The links below will provide you with access to the required case materials for use in this course:

HBS Cases <https://cb.hbsp.harvard.edu/cbmp/access/37527190>

You will have immediate access to the case materials upon placing your order.

**Other books that will be of interest to students taking this course:**

1. *The Goal: A Process of Ongoing Improvement*, Goldratt & Cox,
2. *Clock Speed*, Charles H. Fine
3. *Mass Customization*, B. Joseph Pine
4. *Markets of One*, James H. Gilmore and B. Joseph Pine
5. *Towards a Better Supply Chain*, Charles C. Poirier
6. *Time Based Competition*, Joseph D. Blackburn
7. *Competing Against Time*, George Stalk, Jr. and Thomas H. Hout
8. *Developing Spreadsheet-based Decision Support Systems*, Michelle M. H. Şeref, Ravindra K. Ahuja and Wayne L. Winston

**Class Participation:** To foster a productive learning environment, it is important that everyone come to class prepared and willing to contribute to discussion. Ideally, you will make concise, insightful, and eloquent comments in every class. However, I also recognize the importance of making smaller contributions, including asking good questions. I believe that the learning environment is best when the discussion is not dominated by a few, but moved along incrementally by all of us. Do not be afraid to make points that you may regard as minor, ask clarifying questions, or otherwise contribute in small ways.

**Feedback:** Your informal and formal feedback is very important to me. Please let me know throughout the semester if there is anything I can do to make this class better for you.

#### IV. Grading

I have designed this course to introduce you to Supply Chain / Operations Management using a combination of textbook reading, lectures and problems, case studies and business articles. To get full credit for class participation students must participate in all class discussions. **No makeup participation credit is available for missed classes. Exams and Quizzes will be closed book and notes. Required equations will be provided. Quizzes will be both announced and unannounced.** Make-up Examination 1 and/or quizzes will only be considered in extreme (possible documentation required) circumstances approved in advance. Make every effort to attend all scheduled classes.

Each student's final numerical score for the course is based on the following items and weights:

<u>Item</u>	<u>Percent</u>
Examination 1	35
Examination 2	30
Quizzes (count best 4 of 5)	15
<u>Class Participation/ HW / Peer Evaluation</u>	<u>20</u>
<b>Total</b>	<b>100</b>

## V. Accommodations for Students with Disabilities

Our objective is to help all students achieve their highest potential in the Bauer College of Business. If you need to receive accommodation in the classroom, on exams or with assignments, please make arrangements with your instructor prior to the exam or assignment. You can also contact the Justin Dart Center for Students with Disabilities (713-743-5400) in order to obtain assistance. Services provided by the Center for Students with Disabilities include assistance with course accommodations, adaptive equipment, individualized exam administration, taped textbooks, wheelchair repair, library needs, handicapped parking, as well as many other needs.

## VI. Academic Integrity

All students are expected to be familiar with the University of Houston Academic Honesty policy that is published in the graduate catalog. In particular, the following four principles apply to this class:

- All homework assignments and exams should reflect *your own effort only* (except as noted above for assignments where work with other students is documented). Discussion with others from another section about graded submissions is a violation of the Academic Honesty Policy.
- **Passing cases, case notes and class handouts to students who have yet to take the course, who attend a different section, or receiving material from those who took the class in the past, is *strictly prohibited*.**
- Plagiarizing (the misrepresentation of work done by others as being one's own work) is a violation of the Academic Honesty Policy. Remember to cite all sources of information and ideas to prevent problems.
- You may *not* submit the same work (or substantially similar work) to meet the requirements of more than one course without the written consent of all instructors concerned.

Plagiarism is defined as “representing as one’s own work the work of another without appropriately acknowledging the source.”

Fundamentally, plagiarism is a deceit, an act of intellectual dishonesty that consists of passing off another’s words as one’s own. Plagiarism may take the form of repeating another’s sentences as your own, paraphrasing someone else’s argument as your own or even presenting someone else’s line of thinking in the development of a thesis as though it were your own. In short, to plagiarize is to give the impression that you have written or thought something that you have in fact borrowed from another. Although a writer may use other persons’ words and thoughts, they must be acknowledged as such.<sup>1</sup>

Please make certain that your work clearly acknowledges that of others. Plagiarism is a serious violation of academic honesty and may result in a failing grade and possibly more severe action. The university does not institutionalize plagiarism by acknowledging, excusing or condoning ignorance under the rubric of “unintentional plagiarism”.

## VII. Blackboard/Tentative Class Schedule

We will be using Blackboard to provide additional course-related materials, forums for outside class discussions, study guides, grade posting, etc. In addition, ***I ask that you use my UH email rather than Blackboard for all class-related business.***

An outline of the semester topics, readings and case studies is presented below. Changes will be made as necessary.

<b>Class Schedule SCM 6A01 Section 18768 Summer 2015</b>			
<b>Session</b>	<b>Date</b>	<b>Chapter/Topic and Readings</b>	<b>Chapter; Assignment; Deliverable</b>
<b>1</b>	<b>July 8</b>	<p><b>Intro to Supply Chain Management:</b></p> <ul style="list-style-type: none"> <li>• What is a supply chain?</li> <li>• Importance of supply chain decisions</li> <li>• Evolution into the future</li> <li>• Conceptual model of Transformation Process</li> </ul> <p><b>Rapid Fire Fulfillment Questions:</b></p> <ol style="list-style-type: none"> <li>1. Explain the key elements of Zara’s demand and supply integration strategy. How do they manage customer decoupling order point to provide wide product variety within a short lead time?</li> <li>2. What could a company such as Levi Straus or Nike learn from Zara?</li> </ol>	<p><b>Read: J&amp;C Ch1 and Lecture Notes</b></p> <p><b>Read: “Operations-based Strategy” (California Management Review Vol 40, n.4, pp. 8-25, Summer, 1998)</b></p> <p><b>Read: “Rapid Fire Fulfillment” (HBR Nov 2004)</b></p>
	<b>July 8</b>	<p><b>Operations Strategy:</b></p> <ul style="list-style-type: none"> <li>• How does SCM strategy relate to marketing and finance</li> <li>• Competitive dimensions of Strategy</li> <li>• Order winners and qualifiers</li> <li>• Role of strategic fit and strategy</li> </ul>	<p><b>Read: J&amp;C Ch2 and Lecture Notes</b></p> <p><b>Assignment 1: Due next class. 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:</b></p> <ul style="list-style-type: none"> <li>• List the companies and industries</li> <li>• Prepare a table with the comparative statistics of the companies</li> <li>• Insights and Conclusions</li> </ul> <p><b>Read: “IKEA Design and Pricing”</b> <b>Be prepared to discuss questions 1-4 at the end of the case</b></p>
	<b>July 8</b>	<p><b>Operations and Supply Chain Strategy: Service Systems</b></p> <ul style="list-style-type: none"> <li>• Concepts and Metrics</li> <li>• Evaluation</li> </ul> <p><b>Benihana of Tokyo Questions:</b></p> <ol style="list-style-type: none"> <li>1. Examine the service delivery system of Benihana of Tokyo. What are the flows? Where are the inventories held?</li> </ol>	<p><b>Read: J&amp;C Ch6 pp. 172-177, 180-184</b></p> <p><b>Case: “The Tao of Timbuk2” (pp. 43-44)</b></p> <p><b>Videos:</b> <a href="http://www.timbuk2.com/content/about-manufacturing.html">http://www.timbuk2.com/content/about-manufacturing.html</a> <a href="https://www.youtube.com/watch?v=tYvQpSI7TiQ">https://www.youtube.com/watch?v=tYvQpSI7TiQ</a></p>

		<p>2. What are the key ingredients in Benihana's successful recipe? Compare Benihana's operating ratios with those of a typical service restaurant</p> <p>3. What is the relationship between Benihana's marketing and operations strategies?</p>	<p><i>Case: "Benihana of Tokyo" HBS 9-673-057</i></p>
2	July 15	<b>Project Management: Overview and Critical Path Method</b>	<p><b>Read: J&amp;C Ch 5</b></p> <p><b>Assignment 2:</b> Work problems 2, 3, 4, 5, 6, 8, and 11.</p>
	July 15	<b>Project Management: Risk Management in Projects</b>	<p><b>Read: Normal Curve (see blackboard)</b></p> <p><b>Read: "Superefficient Company"</b> (HBR September 2001)</p> <p><b>Read: "Supply Chain Strategies: Which One Hits the Mark?"</b> (Supply Chain Quarterly, Qtr 1, 2013)</p>
	July 15	<p><b>Business Forecasting:</b> Visit the following website to see how leading economic indicators can be used in medium/long term forecasting. <a href="http://usatoday30.usatoday.com/money/economy/story/Economic-Outlook/35290148/1">http://usatoday30.usatoday.com/money/economy/story/Economic-Outlook/35290148/1</a></p>	<p><b>Read: J&amp;C Ch 3 pp. 46-59, 69-72</b> <b>Assignment 3: (see Blackboard)</b></p> <p><b>Read: "Three Forecasting Building Blocks for Supply Chain Excellence"</b> (Chief Supply Chain Officer Magazine, November 2005) (Found via BlackBoard)</p>
3	July 22	<b>Business Forecasting (continued)</b>	<b>Read: J&amp;C Ch 3 pp. 75-79</b>
	July 22	<b>Examination #1 (Readings, cases, problems and class discussion)</b>	<b>Format: One hour 75 minute duration with a mix of multiple choice, short answer, and problems. Equations will be provided. Bring calculator to exam.</b>
	July 22	<b>Inventory Management: Newsvendor and Order Point Systems</b>	<p><b>Read: J&amp;C Ch 11 pp. 352-368</b></p> <p><b>Assignment 4: (see blackboard)</b></p>
4	July 29	<b>Inventory Management: Safety Stock</b>	<b>Read: J&amp;C Ch 11, pp. 368-372, 375-383</b>
	July 29	<b>Inventory Management: Purchase Discounts and Policies</b>	
	July 29	<b>Location, Logistics and Distribution</b>	<p><b>Read: J&amp;C Ch 14, pp. 450-471</b></p> <p><b>Read: "The Gartner Supply Chain Top 25 for 2014"</b> (Gartner Research, 21 May 2014 ID #: G00264011)</p> <p><b>Read Case: Webvan 602037 - HBR</b></p>
5	August 5	<b>Social Responsibility and Sustainability</b>	<p><b>Video: The Story of Stuff.</b> <a href="http://storyofstuff.org/movies/story-of-stuff/">http://storyofstuff.org/movies/story-of-stuff/</a></p>

			<p><b>Case: “McDonald’s Corporation: Managing a Sustainable Supply Chain”, (HBS 9-907-414)</b></p> <p><b>Case: “Starbucks Corporation: Building a Sustainable Supply Chain” (HBS GS-54)</b></p>
	<b>August 5</b>	<b>Examination #2 (Readings, cases, problems and class discussion)</b>	<b>Format: 75 minute duration with a mix of multiple choice, short answer, and problems. Equations will be provided. Bring calculator to exam.</b>