

# USC MARSHALL SCHOOL OF BUSINESS

## SUPPLY CHAIN MANAGEMENT

IOM 482

Fall 2011

### INSTRUCTOR

Professor Murat Bayiz  
Bridge Hall, Room 400C  
Phone: (213) 740 5618  
E-mail: [murat.bayiz@marshall.usc.edu](mailto:murat.bayiz@marshall.usc.edu)

### OFFICE HOURS

Mondays and Wednesdays, 2:30 pm – 3:30 pm

## COURSE DESCRIPTION

This course focuses on management and improvement of supply chain processes and performance. It will be valuable for students who would like to pursue a career in consulting or take a position in operations, marketing or finance functions in a manufacturing or distribution firm. We explore important supply chain metrics, primary tradeoffs in making supply chain decisions, and basic tools for effective and efficient supply chain management, production planning and inventory control, order fulfillment and supply chain coordination. We will also investigate topics such as global supply chain design, logistics, and outsourcing, several other recent supply chain innovations.

The class format includes lectures, case discussions, guest speakers, and simulation games. The content covers both quantitative and qualitative materials. The cases will feature high-tech companies as well as firms in more traditional industries such as apparel and manufacturing.

## COURSE MATERIALS

**Text Book:** Supply Chain Management by S. Chopra and P. Meindl, Prentice Hall, 2010 (4<sup>th</sup> Edition)

**Blackboard Files** - Additional articles and notes will be posted on the Blackboard

**Course Reader** - Containing a case which can be purchased from Harvard Business Online. To purchase the case, you need to go to <http://cb.hbsp.harvard.edu/cb/access/9781444> and register / sign in. The website will allow you to purchase the cases for \$3.95 using your credit card. There is one case in this online reader, other cases are in the text book.

## COURSE POLICIES AND GRADING

This course covers both quantitative and qualitative materials, and uses many cases for discussion of issues and illustration of approaches. Active participation in class is important throughout the course.

### GROUP CASE REPORTS

Please form teams of two to four persons within the first two weeks. You will be working in these teams for the case write-ups.

The cases are to be discussed within your team and you will submit (as a team) a written report. This Syllabus provides some suggested questions that you should address in your analysis. Each team is required to submit a written report on four case studies (Sportsuff.com, Zappos.com, Barilla SpA, World

Co.) Case write-ups should be at most 5 pages and single-spaced (11 or 12 point font), with appendices attached. The write-up should begin with an executive summary and be organized as follows:

For the Harvard cases:

- Brief description of the company and its environment
- Recommendations to the questions listed on the syllabus
- Conclusions

For the text book case:

- Brief description of the company and its environment
- Answer the questions at the end of the case

You may choose to organize the report differently; however, please ensure that the above aspects are covered and the report is well organized with clear section and sub-section headers. Please avoid repetition of case facts and long expositions. General solutions to specific problems will get you little credit. Consider what and why you believe are the most important factors. Both quantitative and qualitative analyses are important. Creativity in analysis and suggestions that are grounded in case facts will be given high credit. Please state any assumptions made clearly.

#### INDIVIDUAL CASE SUBMISSIONS AND PROBLEM SETS

In addition to the cases (for which you are required to submit group reports), we will be discussing several other cases and articles. You should be prepared for class discussion, and this syllabus provides some suggested questions that you should address. For the individual submissions, please prepare a short write-up (one half to one page long) answering the question(s) listed in the detailed schedule section. The objective of this short submission is to ensure that you prepare the case. For that reason, no late submissions will be accepted. If you are not able to attend the class, you can submit your assignment online through the Blackboard before the class. If you are attending the class, please bring a hard copy of your submission and hand it in at the beginning of the class. As long as your answer shows that you have given sufficient thought to the analysis, you will get full credit. I will not provide feedback on these submissions (unless your work is not satisfactory).

In addition to short case submissions, there will be problems sets. I will grade and return these problem set submissions.

#### EXCEL PRINTOUTS

When printing your Excel file, each spreadsheet should be printed on a single page (let's save some trees!). This can be achieved by using the option Page Layout, Page Setup, Fit to 1 page(s) wide by 1 tall.

#### GROUP ASSIGNMENT EVALUATIONS

Team assignments provide a valuable learning experience – how to work effectively and efficiently in groups, learning from others, and honing your ability to communicate to others. Although your team's grade depends on each member's efforts, some students can be tempted to let others carry their load. In order to provide an incentive for all students to make maximum contributions to the study group, you will be asked to grade each team member's contributions. Your group grades will be adjusted to obtain an individual grade based on feedback about performance provided by other members of the group (I will

post the group assessment form on Blackboard). If you do not submit your group assessment form, it is assumed that you have assigned a rating of 100% to all your group members.

## EXAMS

There will be one midterm exam and a final exam, and each will consist of two parts. The first part will be qualitative and closed-book, with a combination of multiple choice, short answer and problem/essay questions, while the second part will be quantitative and open-book.

According to the USC Final Exam Schedule, the final exam is scheduled for **December 12th, at 8:00 am**. Please take this into account when scheduling your trips! If there are extenuating circumstances that prevent you from taking an exam, you must discuss the reason with me before the time of the exam. You will not be given a make-up exam unless you obtain permission from me in advance. In addition, you must be able to document the extenuating circumstance. If you miss the exam due to a medical emergency that can be documented and verified, then a make-up exam will be given. Otherwise, a grade of zero will be given for the missed exam.

## CLASS PARTICIPATION

Class participation requires that you do the assigned readings, analyze the cases based on the questions given and participate actively in class. I prefer substantive comments based on good analysis rather than brief, general comments that add little to the discussion and learning. If you are reluctant to talk in class but would like to show your preparation, please provide me with your analysis before class. Be prepared to defend your suggestions or solutions with careful and thoughtful analysis! Useful criteria for measuring effective class participation include:

- Is the student absent too many times? Is the participant a good listener?
- Are the points that are made relevant to the discussion? Are they linked to the comments of others?
- Is there a willingness to participate and bring new ideas?
- Do the comments show evidence of analysis of the topic or the case?
- Do the comments clarify or build upon the important aspects of earlier comments and lead to a clearer statement of the concepts being covered?

## GRADING

Your grade in this course will be based on individual class participation, group assignments, individual assignments and tests. I will try to assess your understanding of the tools and concepts covered, your ability to integrate and apply those concepts and your contribution to the learning experience of the class as follows:

Group Case Reports (4): 20%

Class Participation: 5%

Individual Submissions (5): 15%

Midterm: 25%

Final: 35%

### NOTICE ON ACADEMIC INTEGRITY

The use of unauthorized material, communication with fellow students during an examination, attempting to benefit from the work of another student, and similar behavior that defeats the intent of an examination or other class work is unacceptable to the University. It is often difficult to distinguish between a culpable act and inadvertent behavior resulting from the nervous tensions accompanying examinations. Where a clear violation has occurred, however, the instructor may disqualify the student's work as unacceptable and assign a failing mark on the paper.

Academic dishonesty includes: (Faculty Handbook, 1994: 21-22):

- Examination behavior - any use of external assistance during an examination shall be considered academically dishonest unless expressly permitted by the teacher
- Plagiarism - the appropriation and subsequent passing off of another's ideas or words as one's own. If the words or ideas of another are used, acknowledgment of the original source must be made through recognized referencing practices
- Other types of academic dishonesty - submitting a paper written by or obtained from another, using a paper or essay in more than one class without the teacher's express permission, obtaining a copy of an examination in advance without the knowledge and consent of the teacher, changing academic records outside of normal procedures and/or petitions, using another person to complete homework assignments or take-home exams without the knowledge or consent of the teacher

### FOR STUDENTS WITH DISABILITIES

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m. - 5:00 p.m., Monday through Friday. The phone number for DSP is (213) 740-0776.

## SOME USEFUL WEBSITES FOR CONDUCTING SUPPLY CHAIN RESEARCH

### COUNCIL OF SUPPLY CHAIN MANAGEMENT

- <http://www.cscmp.org/>  
This is the largest professional organization that focuses on supply chain management. This portal contains a complete list of "glossary" for Supply Chain Management, industry news and some recent case studies.

### FORRESTER RESEARCH

- <http://msbapps05.marshall.usc.edu:2207/rb/generalist>  
These reports are available at our Marshall Library via Marshall's intranet access. Forrester Research offers the latest market trend about various supply chain issues such as ERP systems, Information technology adoption, etc.

### ONLINE JOURNALS/REPORTS

- *Supply Chain Link* (<http://www.manufacturing.net/scl/>)  
This is a portal that links with many helpful sites about logistics, ERP, manufacturing, software and technology. It gives you an online version of selected article from many sources including *Supply Chain Management Review*. You can download some free copies. It also provides some news from Lexis-Nexis.
- *Purchasing/Supply Chain* (<http://www.manufacturing.net/magazine/purchasing/>)  
This site provides the online version of *Purchasing*. It provides some industry news about procurement, logistics and transportation issues.
- *Information Technology* (<http://www.informationweek.com/>)  
This site provides the on-line version of the *Information Week* magazine. It is good for learning the latest ERP/IT/IS stuff related to supply chain.
- *Logistics* (<http://www.inboundlogistics.com/>)  
This site will link you up with the relevant sites. A pretty good resource if you are getting into the logistics issues.
- *The McKinsey Quarterly* (<http://www.mckinseyquarterly.com/home.aspx>)  
Under the "Functions" tab, you can access to many global supply chain studies in the "operations" area. Free registration.

### UNIVERSITY/INDUSTRY JOINT FORUMS

- Stanford Global Supply Chain Forum (<http://www.stanford.edu/group/scforum/>)
- MIT Supply Chain Strategy Forum (<http://www.MITsupplychainstrategy.com>)
- The Center for Digital Strategies at the Tuck School of Business  
(<http://www.tuck.dartmouth.edu/digitalstrategies>)
- North Carolina State Supply Chain Resource Forum (<http://scrc.ncsu.edu/>)  
These forums offer white papers, cases, supply chain glossary, and various links to other interesting supply chain sites.

## TENTATIVE CLASS SCHEDULE

### WEEK 1 – AUGUST 22 & AUGUST 24, 2011

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Introduction to Supply Chain Management and Supply Chain Strategy

**Readings:**

- Chapter 1 and 2
- [Blackboard] What Employers Demand from Applicants for MBA-Level Supply Chain Jobs and the Coverage of Supply Chain Topics in MBA Courses, Sodhi, Son, and Tang. *Interfaces*, 469-484. November 2008

### WEEK 2 – AUGUST 29 & AUGUST 31, 2011

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Supply Chain Performance Metrics and Drivers and Seven-Eleven Japan Case Analysis

**Case:** [Chapter 3] Seven-Eleven Japan Co.

**Reading:**

- Chapter 3

**Assignment:**

- [Individual] Seven-Eleven Japan – Question #3 (due on August 31)

### WEEK 3 – SEPTEMBER 5 & SEPTEMBER 7, 2011

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No class on September 5 – Labor Day

Distribution Network in a Supply Chain and Network Design

**Readings:**

- Chapter 4 and 5

### WEEK 4 – SEPTEMBER 12 & SEPTEMBER 14, 2011

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Sportstuff.com Case Analysis and Global Supply Chain Networks

**Case:** [Chapter 5] Managing Growth at Sportstuff.com

**Readings**

- Chapter 6

**Assignment:**

- [Group] Case Report for Sportstuff.com (due on September 12)

### WEEK 5 – SEPTEMBER 19 & SEPTEMBER 21, 2011

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Demand Forecasting and Aggregate Planning

**Guest Speaker:** Clive Thomas from Nestle on September 21

**Readings:**

- Chapter 7 and 8
- [Blackboard] Note on Forecasting
- [Chapter 8] Specialty Packaging Corporation (B) Case – in class exercise

**Assignment:**

- [Individual] – Chapter 7 Exercises #3 and 4 (due on September 21)

**WEEK 6 – SEPTEMBER 26 & SEPTEMBER 28, 2011**

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Sales and Operations Planning and Zappos.com Case Analysis

**Case:** [Online Purchase] Zappos.Com: Developing a Supply Chain to Deliver Wow! (Stanford, GS-65)

Consider the following questions:

1. What are Zappos' core competencies and sources of competitive advantage? How sustainable are they? What role does corporate culture play in these questions?
2. How important is next-day air shipment to the customer experience? Is it worth the cost? How might you change it in the cost-conscious environment facing the company in late 2008?
3. How would you expand the business? Would you add more products, more geographies, or by selling private labels? As you expand the business, how can the company become more profitable, particularly in light of the costs associated with the focus on service?
4. How would you expect the environment of a more cost-conscious consumer to affect Zappos' business? What can Zappos do in such an environment to maintain sales growth?

**Readings:**

- Chapter 9

**Assignment:**

- [Group] Case Report for Zappos.com (due on September 28)

**WEEK 7 – OCTOBER 3 & OCTOBER 5, 2011**

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Managing Cycle and Safety Inventory

**Readings:**

- Chapter 10 and 11
- [Blackboard] Note on Inventory Models

**WEEK 8 – OCTOBER 10 & OCTOBER 12, 2011**

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Midterm Review on October 10 and Midterm on October 12

**WEEK 9 – OCTOBER 17 & OCTOBER 19, 2011**

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Harvard's Global Supply Chain Simulation Game (Online Purchase)

**Assignments:**

- [Individual] Chapter 10 - Exercises #1, 2, and 3 (due on October 19)

### WEEK 10 – OCTOBER 24 & OCTOBER 26, 2011

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Managing Product Availability and Hamptonshire Express Case

**Case:** [Course Reader #9] Hamptonshire Express (HBS #9-698-053) – in-class exercise

- Please bring your laptops to class and download the required files to your laptop before the class

**Reading:**

- Chapter 12

**Assignment:**

- [Individual] Chapter 11 - Exercises #1, 2, 7, and 8 (due on October 26)

### WEEK 11 – OCTOBER 31 & NOVEMBER 2, 2011

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Logistics and Managing Transportation

**Reading:**

- Chapter 13

**Assignments:**

- [Individual] Chapter 12 – Exercises 1, 2, 6, 7 (due on November 2)

### WEEK 12 – NOVEMBER 7 & NOVEMBER 9, 2011

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Sourcing and Coordination in a Supply Chains, Bullwhip effect, Barilla Case Study

**Case:** [Online Purchase] Barilla SpA (A) (HBS 9-694-046)

Consider the following questions:

1. Diagnose the underlying causes of the difficulties that the JITD program was created to solve. What are the benefits and drawbacks of this program?
2. What conflicts or barriers internal to Barilla does the JITD program create? What causes these conflicts? As Giorgio Maggiali, how would you deal with these?
3. As one of Barilla's customers, what would your response to JITD be? Why?
4. In the environment Barilla faced in 1990, would JITD or a similar program be feasible and effective? If so, which customers would you target next? How would you convince them that JITD is worth trying? If not, what alternatives would you suggest to combat the difficulties faced by Barilla's operating system?

**Readings:**

- Chapters 14 and 17
- [Blackboard] The Bullwhip Effect in Supply Chains, H.L. Lee, P. Padmanabhan, S. Whang, *Sloan Management Review*, Spring 1997, pp. 93-102

**Assignment:**

- [Group] Case Report for Barilla (due on November 9)



### WEEK 13 – NOVEMBER 14 & NOVEMBER 16, 2010

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No Class on November 14 – Out of Town for a Conference

World Co. Case Analysis on November 16

**Case:** [Online Purchase] Supply Chain Management at World Co., Ltd. (HBS #9-601-072)

Consider the following questions:

1. Examine the features of fashion retailing in Japan. How can a company use its supply chain to compete in this environment?
2. Identify important aspects of World's supply chain focusing on the processes for manufacturing, demand forecasting and inventory planning.
3. How do the features of the supply chain explain the company's remarkably short lead times (relative to U.S. apparel supply chains)? Examine the features of the supply chain and identify why the company is able to respond so effectively.
4. Can the World's supply chain processes be replicated at other companies? Identify potential barriers.

**Readings:**

- Chapter 15

**Assignment:**

- [Group] Supply Chain Management at World Co., Ltd. (due on November 16)

### WEEK 14 – NOVEMBER 21 & NOVEMBER 23, 2011

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IT in Supply Chains on November 21

No Class on November 23 - Thanksgiving Holiday

**Reading:**

- Chapter 16

### WEEK 15 – NOVEMBER 28 & NOVEMBER 30, 2011

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Review and Class Wrap-up

Final Exam: December 12 at 8:00 am