

The Hong Kong University of Science and Technology
Department of ISOM
ISOM 4770 Supply Chain Management
Spring Semester 2011-2012

Classes: Mon, Wed 10:30 - 11:50 am Room 3006
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Course Description:

Supply chain management is one of the fastest growing areas in today's business world. Global companies such as IBM, HP, P&G and Polaroid all acknowledge that by integrating various activities of a company, such as design, demand forecast, supply and transportation, the companies become much more efficient and competitive. This course is focused on the theory and implementation of supply chain management in a real world setting. Upon completion of the course, students will master the essential managerial and technical aspects of supply chain management. To this end we will review the major building blocks of supply chain management as well as their implementations in companies such as HP, Zara and Seven-Eleven Japan among others.

Teaching Approach:

This is a case-oriented course. Altogether we will study 11 cases and 2 articles. In addition, a couple of supply chain games as well as videos will be played in class. Because of the case approach, students should prepare for a large amount of reading. They are expected to attend all the lectures.

Intended Learning Outcomes

At the end of this course, students should be able to

1. Identify and analyze some of the most important problems in supply chain management in different industries; (ILO 1, 4)
2. Create supply chain solutions that have been used in practices; (ILO 1, 4)
3. Apply a strategic supply chain perspective to different companies. (ILO 1, 4)

This course will also provide students with the opportunities to develop their abilities to

4. Work effectively in a team and lead a team; (ILO 5)
5. Work with other functions in making supply chain improvement; (ILO 3)
6. Communicate effectively in oral English in assigned task contexts. (ILO 2)

Prerequisite: Third year standing

Assessment Scheme: Your course grade is determined by:

Homework assignment	10 %	20 points
Final project	15 %	30 points
In-class quiz	30 %	60 points
Final exam	45 %	90 points
Total	100%	200 points

Examination: There will be one in-class quiz and one final exam, both open-book and open-notes. The quiz consists of 20 multiple choice questions. It is scheduled to be held on March 7. Detailed information about the final exam will be announced later in the semester.

Homework assignment: There is one homework assignment. You are expected to organize a study team with 3 or 4 members to work on it.

Final project: At the end of the course your team will conduct a final project. This will be a case about a company's supply chain. Choices and materials of companies will be provided, though you are not obliged to choose from. You have to provide analysis and recommendations for the company. A presentation is to be delivered.

Student learning resources: The required textbook is *Designing and Managing the Supply Chain – Concepts, Strategies, and Case Studies*, by Simchi-Levi, Kaminsky and Simchi-Levi, 2009 third edition, Irwin McGraw-Hill. It is available in the university bookstore. In addition, extra articles, cases (listed below) and lecture notes will be distributed both electronically and in class. Please visit the following web site for announcements and downloads: <http://lmes2.ust.hk>.

Articles:

1. “Rapid-Fire Fulfillment” by Ferdows, Lewis and Machuca, *Harvard Business Review*, November 2004, p. 1–6.
2. “A Risk-Return Framework for Inventory Management” by K. L. Cheung, *Supply Chain Management Review*, January-February 2002, p. 50-55.
3. “A Portfolio Approach to Supply Chain Design” by Olavson, Lee and DeNyse, *Supply Chain Management Review*, July-August 2010, p. 20-27.

Cases: (Following the sequence)

1. Donner Manufacturing Company
2. Steel Works, Inc.
3. Highland Inc.
4. Lamson Corporation (R)
5. Toy World, Inc.
6. Sport Obermeyer, Ltd.
7. HP Deskjet Printer Supply Chain
8. National Bicycle Industrial Co.
9. Tenko Automotive Systems, Inc.
10. Barilla SpA (A-D)
11. Seven-Eleven Japan Co.

Course Schedule

Module 1: Basic Inventory Management in Supply Chains

- Feb 1 Course Orientation
Feb 6 Continuous Review Inventory Control
Reading: Sections 2.2.6, 2.2.7 of textbook
Feb 8 Service Level and Donner Manufacturing Case
Feb 13 Periodic Review Inventory Control: Steel Works Inc. Case of Chapter 2
Reading: 2.2.8
Feb 15 Managing Spare Part Inventory: Highland Inc. Case

Module 2: Intermediate-Range Production Planning in Supply Chains

- Feb 20 The Lamson Corporation Case
Feb 22 Master Production Scheduling: Toy World Case

Module 3: Supply Chain Management Innovations

- Feb 27 What is Supply Chain Management?
Reading: 1.1 - 1.6 except 1.2
Feb 29 Accurate Response: Sport Obermeyer, Ltd. Case of Chapter 3
Mar 5 Risk Pooling and Postponement
Reading: 2.3, 6.2.1 - 6.2.3, 11.2.3, 11.2.4
Mar 7 **In-Class Quiz**
Mar 12 Flexible Response: HP Deskjet Printer Supply Chain Case of Chapter 11
Reading: 11.2.8
Mar 14 Mass Customization: National Bicycle Case
Reading: 11.4
Mar 19 Homework Presentation: A Portfolio Approach to Supply Chain Design
Mar 21 Homework Presentation: A Portfolio Approach to Supply Chain Design
Mar 26 Design for Variety: Tenko Automotive Systems, Inc. Case
Mar 28 Quick Response: Zara's Fast Fashion
Reading: The "Rapid-Fire Fulfillment" Article
Apr 2 The Beer Game (Note: Special Time 10:00 am – 12:00 p.m.)
Apr 4 Mid-Term Break
Apr 9 Mid-Term Break
Apr 11 The Bullwhip Effect
Reading: 5.1, 5.2 except 5.2.1, 5.2.2
Apr 16 Vendor Managed Inventory: Barilla SpA (A) Case of Chapter 5
Reading: 8.4
Apr 18 Vendor Managed Inventory

Module 4: Designing and Configuring Supply Chains

- Apr 23 Get Leverage from Logistics
Reading: 7.1-7.5 except 7.3.3
Apr 25 Risk-Based Inventory Planning
Reading: Article "A Risk-Return Framework for Inventory Management"

Apr 30 Seven-Eleven Japan Co. Case and Radio Frequency Identification (RFID)
Reading: 15.5
May 2 **Project Presentation**
May 7 **Project Presentation**
May 9 **Project Presentation**

Caveat

The instructor reserves the right to modify the syllabus if deemed necessary.