

IEMS 486: Supply Chain Management Summer 2012

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Class Time and Location: Tuesday 6:30-9:30 (FORD 1.350)

COURSE DESCRIPTION

Supply chain management is unique and, to some degree, represents a paradox because it is concerned with one of the oldest and also the most newly discovered activities of business. Supply chain system activities - information sharing, inventory management, warehousing, transportation, and facility location - have been performed since the start of commercial activity. It is difficult to visualize any product that could reach a customer without logistical support. Many firms focus on logistics and supply chain management as a source of competitive advantage. There is a realization that no company can do any better than its logistics system. This becomes even more important given that product life cycles are shrinking and competition is intense. Logistics and supply chain management today represent great challenges as well as tremendous opportunities for most firms.

In this course we will view the supply chain from the point of view of a general manager. Logistics and supply chain management are all about managing the hand-offs in the supply chain - hand-offs of either information or product. The design of a logistics system is critically linked to the objectives of the supply chain. The main goal in this course is to understand how logistical decisions impact the performance of the firm as well as the entire supply chain. The key will be to understand the link between supply chain structures and logistical capabilities in a firm or supply chain. Emphasis will be given to real world examples and applications as well as the development of modeling skills. Extensive use will be made of Excel as a modeling environment.

LEARNING OBJECTIVES

1. To introduce students to the development of mathematical modeling and solution tools for logistics and supply chain management;
2. To teach students to use these tools to analyze strategic, tactical, and operational decisions including facility location, vehicle routing, and inventory management; and,
3. To engage students in case studies based on real world logistics and supply chain decisions.

PREREQUISITES

IEMS 407 is a prerequisite for this class, or permission of the instructor for students with sufficient quantitative background.

COURSE MATERIALS

Textbook: Chopra, S. and P. Meindl (C&M), *Supply Chain Management: Strategy Planning and Operation*, Prentice Hall, Upper Saddle River, NJ (4th edition).

Course home page: The course page on Blackboard will guide you to all the downloadable files related to the course (posted in the course of the term).

COURSE ASSESSMENT

1. Submission cases (30%).
2. Participation (20%).
3. Problem sets (20%).
4. Final exam (30%).

Submission cases: There are four full case write-ups. Each case is due in groups. Please keep group sizes to at most five and read the section on Guidelines for Written Cases and try to structure your reports accordingly.

Discussion cases: There are 3 in-class discussion cases. Each team must submit a Power Point presentation (1 slide per question) by 7:00 p.m. on Monday preceding the in-class discussion of the case (with the exception of the first case on 7-Eleven Japan). The presentations should clearly specify the team's recommendations (based on the questions posed). Discussion cases count towards class participation.

Class participation: Your grade will depend on your preparation of the assignments and the quality of your contribution in class. Some key characteristics of valuable contributions are:

- **Relevance:** Are your comments timely and linked to the comments of others?
- **Advancement:** Do your comments take the discussion farther or deeper than previous comments?
- **Fact-based:** Have you used specific data to support the assertions that you are making?
- **Logic:** Is your reasoning consistent and logical?
- **Originality:** Do your comments merely restate the facts or do they provide new insights?

There should be enough opportunities for you to participate. To increase opportunities for effective participation, I will occasionally cold call students. Please leave your name card up for the entire duration of each class.

Attendance Policy: Each student is expected to be present for all the sessions; your class participation points depend on this. If you cannot be in class for some reason, please make every effort to let me know in advance that you will not be there (ideally by e-mail).

Guidelines for Written Cases: The reports are graded for both content and presentation. A good paper should clearly and succinctly state the recommendations in the first paragraph to provide the reader with a framework. (If a lengthy description of the recommendation seems necessary, append it to the report.) The remaining paragraphs should each present a major part of the rationale for the recommendation in terms of the desirable and undesirable consequences of adopting it. The rationale must consider capabilities that the logistics system under study needs to excel at, and how the current system either provides these capabilities or fails to provide them.

Some common problems in preparing reports result from inadequate analysis. Analysis for a report is a time consuming and intellectually challenging task. Each case has a set of questions which are a guide to help you with the analysis - however, you should not limit your analysis to narrowly answering these questions. The objective is to evaluate a complete range of alternatives, and anticipate and discuss the full consequences of your recommendations.

A good report is not a chronology of the analysis, but a clearly articulated statement of recommendations and support. If there are options under consideration in the case that are rejected, a clear rationale for your decision should be provided. Facts stated in the case need not be restated unless used to make a point. It will be assumed that the most important issues are raised in the report and that all else is less important to the writer. Both desirable and undesirable consequences should be factually stated and supported. In the overall evaluation of a report the discussion of all consequences of the recommendations is of the greatest importance. You must clearly discuss how your recommendations aid in the development of capabilities that are important for the logistics system under study.

- Written cases are due at the beginning of the class session for which they are assigned.
- Late assignments are not acceptable - no credit will be given.
- Submit a hardcopy of your analysis in class - one per group.
- Length & format: Typed, double-spaced and approximately 2 pages in length, not including appendices and exhibits. Exhibits need not be typed but should be neat and easy to understand.

COURSE OUTLINE

<i>Date</i>	<i>Discussion topic</i>	<i>Readings</i>	<i>Assignment due</i>
6/19	Strategic planning and supply chain strategy	Chap. 1-3	Discussion case: <i>Seven-Eleven Japan</i>
6/26	Designing the supply chain Optimization in Excel	Chap. 4-5	Submission case: Blue Nile
7/3	Inventory management I: economies of scale	Chap. 10	Submission case: Sportstuff
7/10	Inventory management II: managing uncertainty	Chap. 11	Problem set
7/17	Responsive supply chains Simulation in Excel	Chap. 12	Submission case: Alko
7/24	Transportation I: strategic analysis	Chap. 13-14	Discussion case: <i>Wheels Group</i>
7/31	Transportation II: operational models ORMS survey		Problem set
8/7	Supply chain coordination Global supply chains	Chap. 6,14,17	Submission case: Mattel
8/14	FINAL EXAM		

Submission cases are bolded. *Discussion cases* are in italics.