Supply Chain Management: Logistics

Fall 2007

Syllabus

Instructor: K. Gita A.
Office hours: Tuesday 12:00 – 1:00 p.m. or by appointment only
Email: gita.ayu@gmail.com
WWW URL: www.geocities.com/gt_isye
Phone: (6221) 567-2548

Classroom: J-507
Class Times: Tuesday 9:00 – 12:00 p.m.

DESCRIPTION

Supply Chain Management is a system approach in managing the entire flow of information, materials, and services from raw material suppliers through supply chain entities to the end customer. Supply chain entities consist of suppliers, factories, and warehouses. The difference between SCM and Supply Management is that SCM does not emphasize the buyer-supplier relationship; instead it emphasizes all aspects of delivering products to customers.

An introduction to industrial supply chain logistics systems, including the components of logistics systems (supplies, storage, materials handling, production, inventory, orders, and transportation systems), the interaction between those components, and models and techniques for the logistics systems analysis.

OBJECTIVES

This course seeks to offer a balanced development of the following issues:

1. Understanding the basic supply-chain logistics concepts
2. Building the quantitative and qualitative analysis skills for logistics system design and management
3. Developing ability to gain insights from press articles which describe company experiences as for logistics system design and operation

PREREQUISITES: probability and statistics, and solving optimization problems

READING MATERIALS

- **Textbooks**: Ballou, Ronald H., *Business Logistics: Supply Chain Management*, 5th ed., Prentice-Hall, 2003 (ISBN: 0130661848)

- **Additional Materials:**
  - Friedman, Thomas L., *The World is Flat*, Penguin Group, 2006
  - HBS Press, *Harvard Business Review on Supply Chain Management*, Harvard Business School Publishing Corporation, 2006
  - HBSC (Harvard Business School Cases), $6.95/copy at www.hbsp.harvard.edu

- APICS (American Production and Inventory Control Society) the Association for Operations Management newsgroup
- Class handouts and course material posted on my website

- **References:**
  - Chopra, Sunil, Peter Meindl, *Supply Chain Management: Strategy, Planning and Operation*, 3rd ed., Prentice-Hall, 2007.
  - Johnson, J., Wood, D., Wardlow, D. and Murphy, Jr., P., *Contemporary Logistics*, 8th ed., Prentice Hall, 2005

TOPICS COVERED

- Review on supply chain management (*the coordination of supply chain activities involving multiple participants in the supply chain*)
  - Supply Chain game
  - Bullwhip effect
  - Vendor managed inventory
- Data and forecasting (review)
  - Data collection technology
  - Extrapolation forecasting
- Freight transportation modes(*i.e. sea cargo, railroad, air cargo, motor freight, and package express transport providers*)
- Transportation mode and route selection
  - Transportation costs and rates
  - Models for mode/carrier selection
  - Minimum-cost path models
- Truckload trucking
  - Time-space networks
  - Assignment problems for scheduling
- LTL Trucking and vehicle routing
  - Traveling salesman problem
  - Vehicle routing problem
- Consolidation transportation
  - Role of consolidation
  - Network design
  - Minimum-cost network flow models
  - Facility location models
- An Integrative example

COURSE ASSIGNMENTS

Pop Quizzes/Case Studies	15 %
Midterm	25 %
Final (Includes case studies)	35 %
Group Assignment	25 %

Case Studies Several cases will be discussed in this course. Cases give you excellent educational experience. Students are *required* to read the scheduled topics or material prior to class, complete the assignments and exercises, and expected to participate in the discussion during the class.

When cases are assigned, students are expected to be able to a) identify the major problem, b) give his/her recommendation to resolve the stated problem (short and long term), and c) provide any supporting analysis

if appropriate for your recommendations. The *quality* of students argument will be stressed; not the quantity or frequency.

Pop Quizzes the purpose of the quiz is to check the level of understanding of the prerequisite required materials or previously discussed material arises. There may be a 1-minute pop quiz promptly at the beginning of the class at random to test that you have prepared the case reading for the day. Quiz will not be cumulative. *No make-up quizzes will be given under any circumstances*. If you have to miss a quiz (for whatever reason), zero grade will be assigned for that quiz unless you have a medical certificate.

Group Assignment (supply chain description and analysis) Team projects are great opportunity to learn how to work effectively as a group and learn from each other in the group. The key success in team project is learning how to share responsibility and how to allocate work among team members based on individual's professionalism.

There will be one group project due on the dead week. A group should consist of 3-4 members. Group members will be assigned by the instructor. A peer evaluation form will be given after the presentation. Submit the form individually or drop it off in my mail box to keep its confidentiality. More information in regards to the group assignment will be posted no later than the 3rd week on the class website.

Students are encouraged to collaborate within the team members only, on discussions, reports, and presentations. Students are not allowed to communicate in any way regarding discussions, reports, and presentations with members from another team. *Failure to follow any instruction for the group assignment will result in 10 points deduction from your grade*.

Exams Exams will cover materials which are taught throughout the semester. *Exams will be comprehensive and closed book*.

- Usually, students are allowed to have one one-side ¼ A-4 paper with handwritten formulas for the midterm and one one-sided A-4 paper with handwritten formulas for the final exam. Copied pages are not allowed.
- Numerical accuracy is an essential element of an engineering project and will be part of the grade.
- Simple calculator is allowed.
- More instruction regarding the exams will be announced one week prior the exam date.

No make-up exams will be given under any circumstances. It is your responsibility to take the exams at the designated times. Travel arrangements are not sufficient reason to warrant a make-up exam or an incomplete grade.

Re-Grade Policy If you believe that there has been an error in marking an exam, quiz, or project, you must bring it on to my attention no later than one week after a paper has been returned to the student. To turn in something for a re-grade, do not write on the originals; instead ask me personally the "Grade Groveling" form stating what you want re-graded and why. Turn this in with the original. In order to minimize superfluous re-grades, if it is found that no additional points should be given to you, *five points* will be deducted from that exam, quiz, or project.

Attendance/Participation In order to pass the course, student is required to have a minimum of 75 % in attendance. If student has less than 75 % attendances, student may not be allowed to follow the remaining sessions for the semester and/or the final exam. From past experiences, students who have a tendency to skip classes have lower performance level compared to those who always attend the class. Coming to class will save your time in preparing for the exams later on.

Classroom Conduct and Professionalism Students must observe professionalism in the classroom. The instructor reserves the rights to remove any student from the classroom for reasons such as working on other subjects, sleeping in class, involved in any informal chatter not related to the topics assigned. *Any usage of cell-phone is strictly prohibited during class period*.

If student's cell phone rings during the class period, ***Rp 5,000.00*** will be charged. All dues must be fully paid prior the end of the class session.

Academic Honesty All students should abide the Universitas Tarumanegara Honor Code of Conduct. Read the student handbook for more information. Cheating includes, but is not limited to:

- Using any materials, tools, or any form of notes except those specifically allowed on tests or quizzes;
- Copying directly from any source including friends, classmates, tutors, or a solution manuals;
- Allowing another person to copy your work;
- Signing another person's name or having another person sign your name on an attendance sheet;
- Taking a test or quiz in someone else's name;
- Having someone else take a test or quiz in your name;
- Asking for a re-grade of a paper that has been altered from its original form;
- Any communication regarding homework or projects with people that are not a member of your lab team is a violation of the honor code;
- Falsifying other's work as your own work;
- Starting to write before the start of quiz or exam;
- Not stopping to write after time is up;
- Communicating with other student by any mean and/ or equipment;
- Having any unauthorized material and/ or equipment;
- Using dictionary;
- Borrowing and/ or lending any equipment from other student.

A student violating the honor code will receive a zero score for that particular exam, quiz, group assignment, or discussion.

TENTATIVE COURSE OUTLINE

Session	Lecturer Topic	Reading Materials	Activities
8/14/07	Introduction to Logistics systems	Chapter 1, 2	Lecture
8/21/07	Review: Forecasting Order Processing and Information Systems	Chapter 9 Chapter 5	Lecture
8/28/07	Transportation Systems	Chapter 6	Lecture
9/04/07	Transportation Models	Chapter 7	Lecture
9/11/07	Review: Inventory System Forecasting and Inventory in Practice	Chapter 10 Case: Sport Obermeyer Ltd	Lecture, Discussion
9/18/07	BEER GAME		Role Playing
9/25/07	MIDTERM	Chapter 8 and 12	
10/23/07	Storage and Handling System		Lecture
10/30/07	Facility Location Network Planning	Chapter 13 Chapter 14	Lecture
11/06/07	Current Practices in Supply Chain Management	Case: Wal-Mart	Discussion
11/13/07	Strategic Alliance and Outsourcing	Chapter 15 Case: Barilla SpA, part A	Discussion
11/20/07	Supply Chain and Its Globalization	The World is Flat	Discussion
11/27/07	Group Presentation		
12/04/07	FINAL EXAM		

Remark:
Schedules are subject to change.
Instructor reserves the right to change the course policy listed in the syllabus throughout the semester.