OM 368: LOSTISTICS AND INVENTORY MANAGEMENT (Spring 2011)

(last updated on January 12, 2011)

#04010 : M-W 11:00-12:30 in UTC 4.124 #04015 : M-W 12:30-2:00 in UTC 1.146

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COURSE DESCRIPTION:

This course is a follow up to the Operations Management course (OM 335 or OM335H). It delves deeper into the concepts of logistics and inventory management, specifically, forecasting, transportation, facility location and assortment planning. Using case studies and an online game, the students will learn to apply the concepts listed above to real-life problems.

The main objectives of this course are:

- To provide you with an understanding of the role and importance of logistics and inventory management in today's successful product and service companies.
- To familiarize you with the basic concepts, techniques, methods and applications of logistics and inventory management strategic planning.
- To enhance your analytical skills and ability to solve real-life logistics and inventory management problems.

Prerequisites: OM335 or OM335H.

^{*}I am also available by appointment but I will <u>not</u> be available before class time on Mondays and Wednesdays.

[†]There will be extra office hours during the week before the midterm and final exams.

COURSE MATERIALS:

1. Required Readings

• Course Packet: Available at the GSB Copy Center. It contains a set of cases we will discuss in class as well as an access code to participate in the Supply Chain Game.

2. Suggested Reading

- Book: "Business Logistics/Supply chain Management" by Ronald H. Ballou, 5th Edition.
 Pearson Prentice Hall 2004. ISBN: 0-13-066184-8
- **3. Course Website:** This course will use Blackboard substantially. The login page is located at http://courses.utexas.edu. A UT EID is required for accessing the web site. If you need more information or tutorials, go to http://www.utexas.edu/cc/blackboard. If you have problems using blackboard, you can call the ITS help desk at 475-9400. You will find the following on Blackboard:
 - **(a) Course Notes:** Before each lecture, a pdf version of the slides will be posted under "Course Documents". Most of the time, these slides will be incomplete and you will be expected to fill in the blanks in class. Partially completed slides will be posted on Blackboard by the end of each lecture.
 - **(b) Assignments:** Homework assignments will be posted under "Assignments" at least 5 days before their due date. Solutions to homework assignments will be posted by the end of the lecture on the day a homework assignment is due.
 - **(c) Practice exams**: Before the midterm, a practice exam will be posted. It will have the exact same number of questions and level of difficulty as the actual test. It will be under "Course Documents".
 - **(d) Forums:** You are invited to post any comments your have about the material and ask questions on the "Discussion Board". You can also post comments, criticisms and suggestions anonymously regarding the course.
 - **(e) Grades:** Grades on exams and assignments will be posted on Blackboard. Please check that the posted grade matches the grade on your paper copy and notify the instructor (for exams) or the TAs (for assignments) as soon as possible in case of a discrepancy.

Remark: Password-protected class sites will be available for all accredited courses taught at The University. Syllabi, handouts, assignments and other resources are types of information that may be available within these sites. Site activities could include exchanging e-mail, engaging in class discussions and chats, and exchanging files. In addition, class e-mail rosters will be a component of the sites. Students who do not want their names included in these electronic class rosters must restrict their directory information in the Office of the Registrar, Main Building, Room 1. For information on restricting directory information see:

PERFORMANCE EVALUATION:

Your grade will be assessed through homework assignments, exams and class participation. Below is a description of how the various types of assignments and tests contribute to your grade, as well as a description of each type of graded work.

	Grade
Midterm exam	20%
Final exam	25%
Supply Chain Game reports (4)	20%
Problem sets (best 8 out of 10)	30%
Class Participation	5%
Total	100%

Extra credit work will not be given under any circumstance.

Exams

The midterm exam will cover the materials from sessions 2-12. It will be in class and will be closed book and closed notes. Remember to bring your calculator. A formula sheet will be provided during the exam (a copy of the sheet will be put on Blackboard before the exam). The questions on the midterm exam will be similar in terms of difficulty to the questions on the problem sets.

The final exam will be comprehensive but with a greater focus on the materials from sessions 16-27. It will be a take home exam so you will be free to use all the material from the course or anything else you would like. It is an individual exam therefore you are not allowed to talk to any of your classmates or consult anyone else but the instructor and the TA. The questions will be based on a real-life problem and you will be given limited guidance to solve it. You will have a week to do the final exam.

Offering a make-up exam for a missed exam is entirely at the discretion of the instructor. Students with legitimate reasons and letters of proof can request to take make-up exams.

A "grading scheme" file, which explains how the graded was calculated, will be made available after the grade exams are returned. Students must read this file before coming to the instructor to discuss their grade. Any concern regarding the grading of exams should be addressed directly to the instructor, no later than two weeks after the graded exam was returned in class.

Homework Assignments

There are two types of homework assignments: Supply Chain Game reports and problem sets.

Unless otherwise stated, all homework assignments have to be submitted, preferably by email as one pdf file to the TA and the instructor within 5 minutes of the starting time of the class session class (please make sure the file is readable and under 2MB), or in class at the beginning of the class session listed on the schedule. They can also be put in the instructor's mailbox or under the instructor's office door but then you need to send an email to the instructor and the TA immediately to let them know that you have done so. No late homework assignment will be accepted.

Supply Chain Game Reports

There are 4 Supply Chain Game reports throughout the semester (each worth 5%). They are all based on the "Supply Chain Game" described below. You will be in teams of 5 students. Your grade on two of these reports will also be based on the performance of your team in the Supply Chain Game. A peer review system will be used at the end of the semester to reward the students who actively participated in the game with bonus points, each worth 0.5% of their final grade (up to 2).

Problem sets

There are 10 problem sets throughout the semester. They contain problem-solving type questions. You may solve the problem sets in teams but in this case, each student must hand in a separate <u>handwritten</u> copy and indicate the names of the people they worked with on the front page. If you do them individually, then you may (and in fact are encouraged to) type it. The solutions to the problem sets will be provided at the end of the day when they are due.

When computing the average grade on the problem sets, the two lowest grades will be dropped. In other words, your final score will be the average of your best 8 scores. However you are strongly encouraged to hand it all 10 problem sets as they constitute the best preparation for the exams.

The students are asked to fill out the form at the end of this syllabus and submit it as part of problem set 1 (for one point out of 10).

All homework assignments will be graded by the TA on a scale of 0 to 10. Points will be given for correctness of your answers and presentation. Any concern regarding the grading of a homework assignment should be addressed directly to the TA and not to the instructor, no later than <u>one week</u> after the graded assignment was returned in class.

Class Participation

Participation in class, in the form of answering questions and/or commenting on the material is strongly encouraged.

Students are expected to prepare before class when the lecture is a case discussion. Class participation will count double on these days.

In each session, students are asked to pick up their name card and return it at the end of the session. Students who participated in class are asked to put their name card back on the instructor's desk, the others are asked to put it on the first row of student desks.

Students may not disturb classmates or use their cell phones in class.

Bonus points

Students who are the first person to notice a significant mistake in the course material (slides, formula sheet, solutions to an assignment etc.) will be awarded a bonus point which will count towards their class participation grade (each bonus point is worth 0.1% of their final grade). Note that spelling or English mistakes are not significant errors.

The "Supply Chain Game"

The "Supply Chain Game" is a web-based, discrete event simulator that illustrates many of the concepts we will discuss in class. It was developed by two Operations Management professors at Northwestern and the University of Chicago. We will play two rounds of the game, each round lasting for one week. You will be playing in teams of 5.

The "Crash Course in Excel"

Knowing how to use Excel is a very valuable tool. The lecture on March 2 will cover some useful methods and functions in Excel which may be useful for doing the homework assignments. This lecture is entirely optional.

SCHOLASTIC DISHONESTY

The McCombs School of Business has no tolerance for acts of scholastic dishonesty. The responsibilities of both students and faculty with regard to scholastic dishonesty are described in detail in the Policy Statement on Scholastic Dishonesty for the McCombs School of Business:

By teaching this course, I have agreed to observe all of the faculty responsibilities described in that document. By enrolling in this class, you have agreed to observe all of the student responsibilities described in that document. If the application of that Policy Statement to this class and its assignments is unclear in any way, it is your responsibility to ask me for clarification. Policy on Scholastic Dishonesty: Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course an/or dismissal from the University. Since dishonesty harms the individual, all students, and the integrity of the University, policies on scholastic dishonesty will be strictly enforced. You should refer to the Student Judicial Services website at http://deanofstudents.utexas.edu/sjs/ or the General Information Catalog to access the official University policies and procedures on scholastic dishonesty as well as further elaboration on what constitutes scholastic dishonesty.

STUDENTS WITH SPECIAL NEEDS

The University of Texas at Austin provides upon request appropriate accommodations for qualified students with disabilities. For more information contact the Office of the Dean of Students at 471-6259 or 471-4641 TTY.

If for some reason you need special assistance to take an exam or complete an assignment please notify me ahead of time so that special arrangements can be made in a timely fashion.

SCHEDULE

The following is a tentative schedule of meetings, readings, and deliverables for the semester. This is subject to change. When there are major changes, you will be notified by email; a current schedule will always be available on the Blackboard course website.

	Date	Topic	Case	Assignments*
1	Jan 19 W	Course presentation		
2	Jan 24 M	Demand forecasting: part I		
3	Jan 26 W	Demand forecasting: part II		PS1
4	Jan 31 M	Demand forecasting: part III		
5	Feb 2 W	Demand forecasting: case study	Wilkins	PS2
6	Feb 5 M	Supply chain game: presentation & IM: Basics		
7	Feb 9 W	IM: EOQ model: part I		
8	Feb 14 M	IM: EOQ model: part II		PS3
9	Feb 16 W	IM: EOQ model: part III		SCGR1
10	Feb 21 M	IM: EOQ model: part IV		
11	Feb 23 W	IM: case study	Blanchard	PS4
12	Feb 28 M	Supply chain game: Debrief of Scenario 1		SCGR2
13	Mar 2 W**	Crash course in Excel		
14	Mar 7 M	Review session		PS5
15	Mar 9 W	Midterm		
	Mar 14 M	[Spring Prook]		
	Mar 16 W	[Spring Break]		
16	Mar 21 M	IM: Newsvendor model		
17	Mar 23W	IM: case study	LL Bean	PS6
18	Mar 28 M	IM: Periodic review (part I)		
19	Mar 30 W	IM: Periodic review (part II)		
20	Apr 4 M	IM: Periodic review (part III)		PS7
21	Apr 6 W	Transportation theory		
22	Apr 11 M	Transportation: case study & SCG: scenario 2	Frito-Lay	PS8
23	Apr 13 W	Facility Location Strategy (part I)		SCGR3
	Apr 18 M	No class		
24	Apr 20 W	Facility Location Strategy (part II)		
25	Apr 25 M	Facility Location Strategy: case study	Amazon	PS9
26	Apr 27 W	Supply chain game: Debrief of Scenario 2		SCGR4
27	May 2 M	Assortment Planning		
28	May 4 W	Review session		PS10
29	TBA	Final exam		

^{*}PS = problem set, SCGR= Supply Chain Game report

^{**} optional session.

OM 368: Course contract

I	have read and understood the syllabus for OM368			
(unique number 04010 or 04015). Specifically, I am a	ware of the following rules:			

- I can only discuss my grade on a homework assignment (Supply Chain Game report or problem set) with the TA for one week after the graded assignments have been returned in class.
- I can only discuss my grade on the midterm exam with the instructor for two weeks after the graded assignments have been returned in class. Before I do so, I need to take a look at the "grading scheme" file.
- On a day when a homework assignment is due, I have to hand it in within 5 minutes of the starting time of the lecture. If I put it in the instructor's mailbox or under her door, I have to email her and the TA immediately after I do so. If I choose to email my homework I have to send it to the instructor and the TA before the start of the lecture.
- No late homework assignment will be accepted.

Please initial every rule then sign and date.

- I understand extra credit work will not be given under any circumstance.
- I should pick up my name card at the start of each lecture. If I participated during the class session, I should put it back at the end on the instructor's desk (honor system).
- I have to return this form back to the instructor signed and initialed by the start of the 3rd lecture with problem set 1 (for one point).

Date and Signature