

O M 335 Operations Management, Spring 2012
Unique Number: 03865

Meeting Time and Location:

Tuesday and Thursday, 08:00-09:30 AM, UTC 1.130.

Professor: Sebastian Souyris

Office Hours: Tuesday and Thursday 5:00 – 6:00PM

Office Location: CBA 1.308E; Mailbox Location: CBA 5.202.

Contact Information: sebastian.souyris@utexas.edu.

Course Description

Operations management involves the integration of numerous activities and processes to produce products and services in a highly competitive global environment. Many companies have experienced a decline in market share as a result of their inability to compete on the basis of responsiveness, cost or quality. Most now agree that world class performance in operations is essential for competitive success and long-term survival. We consider key performance measures of operations (productivity, flexibility, quality, and response time) as well as important concepts for improving the performance of operations along these dimensions. At the end of the course, students will have a fair understanding of the role operations management plays in business processes. Emphasis is given both to familiarization of various production processes and service systems, and to quantitative analysis of problems arising in the management of operations.

Course Objectives:

The course seeks to both improve your understanding of operations management and enhance your analytical skills. The course will present several analytical techniques which would aid you in making decisions in the real world. In the meanwhile, the course will introduce you various aspects, issues, and initiatives in nowadays business operations. At the end of this course, you should have

- Understanding of the importance of operations management and the challenges.
- Understanding of various production processes and service systems.
- Acquired analytical capability to uncover problems and improvement opportunities in production or service processes and recommend process improvement along the dimensions of efficiency, quality and speed.
- Working with others to solve business operations problems.

Course Materials:

- Cachon, G. and C. Terwiesch. Matching Supply with Demand: An Introduction to Operations Management, 2nd Edition New York, NY: McGraw-Hill / Irwin.
- Goldratt, E. M. The Goal, 3rd Edition. Great Barrington, MA: North River Press, Inc.
- Course Packet: available at the GSB Copy Center.

The course outline at the end of this document lists, for every class session, the topic, readings, cases, assignments, and anything else of importance. Please read this outline carefully before every session. Because class time is our most precious and inelastic resource, please come to every class prepared. Essential preparation includes reading the assigned readings and cases, doing the assignments, and bringing these resources and materials to each class.

Course Website:

All course materials available in electronic format will be posted at Blackboard course web site (see <http://courses.utexas.edu>).

- Lecture notes will be posted before the class.
- Homework solutions will be posted the next morning after its due date.
- If you have problems access the materials on Blackboard, please email the professor.

Evaluation:

Exam I	17%
Exam II	17%
Final Exam	35%
Individual Homework	16%
Group Assignment	10%
Class Participation	5%

Exams: A final comprehensive exam will be given during the University assigned period (please check <http://registrar.utexas.edu/schedules/122/finals>) and two regular exams will be given periodically throughout the semester.

- The exam may contain true/false, multiple choice, short answer, or analytical problem solving.
- The exams are closed-book and closed-note. Do remember to bring your calculator. A formula sheet will be provided during the exam.
- No makeup exams unless appropriate paperwork is provided for rescheduling.

Individual Homework: Skill-building exercises will be assigned throughout the semester.

- Each homework assignment must be submitted no later than class on its due day. **NO LATE HOMEWORK WILL BE ACCEPTED.** A grade of zero will be assigned if you do not turn in the homework. Homework due dates can be found on the class schedule below.
- The homework question (except for P0 that will be handed out in class and also available on Blackboard) can be found at Blackboard as a Word document. For example, *P01_L02_ProcessWithRework_Q.doc* indicates that problem 1 is associated with lecture 2. Each problem is graded on a 10 point scale. You may drop the lowest two grades if you submit ALL 18 homework problems (P0-P17), or drop the lowest grade if you submit 17 of them. Please note that you should provide formula, steps, or reasons to support your solution. Homework submission only the final solution will not be given any credit. A sample homework problem with solution is available on Blackboard (*SampleHW_BagelStore.doc*).
- Hand-written solutions are acceptable. However, please make sure that they are readable. Please also write your number (will be given on the back of your name tag) next to your name.
- You may discuss homework problems with your classmates. But you should write **YOUR OWN** solutions. You should also note on your homework who you have discussed with.

Group Assignments: Six group assignments (GP1-GP6) will be completed in self-selected groups of five people. These assignments will apply the concepts introduced in class to “Real-World” problems. A question set will be provided for each of the assignment.

- It is your responsibility to form your groups as soon as possible and inform the Professor by email (address given above). The groups should be formed no later than January 26 and not having a group is **NOT** a reason for late submission of group assignment. **No LATE CASE ASSIGNMENTS WILL BE ACCEPTED.**
- For group assignment, a single grade is assigned to each group. The answers should be typed and submitted electronically through Blackboard. Only one submission from a group member is required. Please remember to write the name and number of each group member who contributes to the submission. No credit will be given if the name is not shown on the submission.

Class Participation: Regular attendance at all class meetings is expected. You will be assigned five points for your participation grade.

- (1 point) Participate in the beer game.
- (4 points) Actively contributing to the enhancement of learning
 - It is important that everyone comes to class prepared and contributes to discussion. Ideally, you will make concise, insightful, and eloquent comments in every class. However, I also recognize the importance of making smaller contributions, including asking good questions. I believe that the learning environment is best when the discussion is not dominated by a few, but moved along incrementally by all of us.
 - You are encouraged to discuss lecture/homework problems on the discussion forum on Blackboard. You can also post clarification questions or ask for help on the Blackboard. Providing intelligent answers to other questions are also considered as class participation.
 - Name cards will be used to track attendance (from January 31th). It is your responsibility to pick up your name card before the class and return it back to me after class.
 - Be on time! Not disrupting classmates, no surfing the net (NO LAPTOPS), reading newspapers, ringing phones, talking, sleeping or working on that assignment due in another course.

Regrade Requests: If you wish a regrade of any homework assignment or exam, please appeal it within SEVEN CALENDAR DAYS.

- For the tests and homework assignments, the date that I attempt to return it to you in class (typically within one week). Please check your grade on the Blackboard regularly and report any discrepancies to me immediately.
- For the final exam, the first class day of the semester immediately following this course.

After these seven days, I will consider all grades final. Please realize that there are standard policies for point deductions for each problem with any exam or assignment, so unless the grader has misapprehended your intent or misread your work, any partial credit is unlikely to change.

Tentative Class Schedule: (I reserve the rights for possible changes)

	Date	Topic	Readings	HW	HW Due
1	01/17 Tue	Introduction to Operations Management	CT: Chapter 1	P0	
Process Analysis					
2	01/19 Thu	Process capacity and bottleneck analysis	CT: Chapter 3	P1-2 GP1	P0
3	1/24 Tue	Labor cost and line balancing	CT: Chapter 4.1-4.5	P3	Form groups
4	1/26 Thu	Process analysis case: Kristen's Cookie	CP: Kristen's Cookie	GP2	P1-2 GP1
5	1/31 Tue	Setup times and batching	CT: Chapter 6.1-6.3, 6.7-6.8	P4	
6	2/02 Thu	Little's law Case: CRU Rental part 1	CT: Chapter 2.1-2.3 CP: CRU Rental	P5, GP3	GP2
7	2/07 Tue	Inventory costs Process selection	CT: Chapter 2.4-2.6 CP: Inventory-driven cost	P6	P3-4
8	2/09 Thu	Case: CRU Rental part 2	CP: CRU Rental		GP3
9	2/14 Tue	Review for Exam I	Sample Exam I		P5-6
10	2/16 Thu	Exam I			
11	2/21 Tue	Debrief Exam I Variability in the process	CT: Chapter 7.4-7.3	GP4	
12	2/23 Thu	Service time, waiting time, service level, pooling, and priority rules	CT: Chapter 7.5-7.6, 7.10-7.11	P7	
13	2/28 Tue	Throughput Losses	CT: Chapter 8.1-8.5	P8-9	P7
14	03/01 Thu	Queuing case: UHS	CP: University Health Service		GP4

Inventory and Supply Chain Management					
15	3/06 Tue	Forecast demand uncertainty and Newsvendor model	CT: Chapter 11.1-11.4	P10	P8-9
16	3/08 Thu	Newsvendor performance measures	CT: Chapter 11.5-11.6	P11	
03/ 12 to 17 Spring break.					
17	3/20 Tue	Reducing mismatching costs through quick response	CT: Chapter 12.2, 12.4	P12-13	P10-11
18	3/22 Thu	EOQ and multi-period inventory management	CT: Chapter 6.4-6.6	P14	
19	3/27 Tue	Review for Exam II	Sample Exam II		P12-14
20	3/29 Thu	Exam II			
21	4/03 Tue	Debrief Exam II Book Review: the Goal	The Goal		GP5
22	4/05 Thu	Bullwhip effect and incentive conflicts, supply chain coordination	CT: Chapter 16.1-16.4	P15	
23	4/10 Tue	Beer Game			
24	4/12 Thu	Risk pooling and risk management	CT: Chapter 14.1-14.4	P16	
Quality Management					
25	4/17 Tue	Quality management and quality control Statistical process control and impact on process flow	CT: Chapter 9.1-9.5,9.8-9.9 CP: Decoding the DNA of the TPS	P17 GP6	P15-16
26	4/19 Thu	Case: Toyota	CT: Chapter 10.1-4 Handout		P17 GP6
27	4/24 Tue	Lab Session			
28	4/26 Thu	Lab Session			

29	5/01 Tue	Lab Session			
30	5/03 Thu	Review for final exam	Practice Final Exam		
	05/15 Tue	2:00- 5:00 pm Final Exam	These date is tentative and to be confirmed about 2 weeks before the last day of class.		

CT: the text book
 CP: the course packet
 P0-17: Individual homework problems
 GP1-6: Group assignments

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.

Class Web Sites and Student Privacy

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: <http://registrar.utexas.edu/students/records/restrictmyinfo>

Students with Disabilities

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

Accommodations for Religious Holidays

By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.