
OM 335: OPERATIONS MANAGEMENT (Spring 11)

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#03970 : M-W 2:00pm-3:30pm in UTC 4.104

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*I am also available by appointment but I will not available before class time on Mondays and Wednesdays.

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

COURSE DESCRIPTION:

Operations Management (OM) is the cost effective management of resources to achieve organizational goals. OM focuses on the systematic planning, design, operation, control, and improvement of the processes which produce goods and deliver services. Managing operations is vital to every type of organization, for it is only through effective and efficient utilization of resources that an organization can be successful in the long run. This is especially true today, when we see that significant competitive advantages accrue to those firms that manage their operations effectively.

This course is the “foundations course” for our new major in Supply Chain Management. This class can also be useful to students with other majors because every business has an operations component.

Prerequisites: credit or registration for BA 324 (or credit for MIS 324) and credit or registration for STA 309.

COURSE OBJECTIVES:

The main objectives of this course are:

- To provide you with an understanding of the crucial importance of operations management in today's business environment.
- To familiarize you with the basic concepts, techniques, methods and applications of operations management.
- To enhance your analytical skills and ability to uncover problems and opportunities for improvement in production and service processes.

COURSE MATERIALS:

1. Required Readings

- Book: "The Goal" by Goldratt and Cox, 3rd Revised Edition. Great Barrington, MA: North River Press, Inc. 2004. ISBN: 978-0884271789 ¹
- Course Packet: Available at the GSB Copy Center. It contains a set of cases we will discuss in class.

2. Recommended Readings

- Textbook: "Matching Supply with Demand: An Introduction to Operations Management" by Cachon, G. and C. Terwiesch. New York, NY: McGraw-Hill / Irwin, 2nd edition (June 2008). ISBN: 978-0073525167²

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 class day.

(b) Assignments and Solutions: Homework assignments will be posted under "Assignments" at least 5 days before their due date. Solutions will be posted by the end of the lecture on the day a homework assignment is due.

¹ This is the latest edition. You may use the second edition or higher.

² This is the latest edition. You also use the first edition.

(c) Practice exams: Before every test, 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:*

<http://www.utexas.edu/student/registrar/catalogs/gi02-03/app/appc09.html>

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 I	20%
Midterm Exam II	20%
Final Exam	35%
Homework assignments (best 10 out of 12)	20%
Class Participation	5%
Total	100%

Extra credit work will not be given under any circumstance.

Exams

Midterm Exam I will cover the materials from sessions 1-10 (Process Analysis). Midterm Exam II will cover the materials from sessions 12-19 (Project Management, Queuing Theory, Quality

Management and The Goal). The Final Exam will be comprehensive but with a greater focus on the materials from sessions 22-30 (Inventory Management, Supply Chain Management and Revenue Management).

The exams are closed book and closed notes. Do 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).

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 will be made available after the graded exams are returned; it will explain how the grade was calculated. 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 12 homework assignments throughout the semester. You may do the homework assignments in teams but in this case, each student must hand in a separate handwritten copy and indicate the names of the people they worked with on the front page. If you do the assignment individually, then you may (and in fact are encouraged to) type it.

Homework assignments have to be turned in in class at the beginning of the class session listed on the schedule or sent by email as one PDF, DOC or DOCX file (no JPG or XLS please!) to the instructor and the TA, within 5 minutes of the starting time of the class session. 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. The solutions to the homework will be provided at the end of the day when it is due; therefore no late homework assignments will be accepted.

When computing the average grade on homework assignments, the two lowest grades will be dropped. In other words, your final score will be the average of your best 10 scores. However you are strongly encouraged to hand in all 12 assignments as they constitute the best preparation for the exams.

Homework assignments will be graded by the TA on a scale of 0 to 10. Points will be given for effort (especially for the case-based assignments), correctness of your answers and presentation. Any concern regarding the grading of homework assignments should be addressed directly to the TA and not to the instructor, no later than one week after the graded assignment was returned in class.

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

Class Participation

Regular attendance at all class meetings is expected. Attendance will be formally taken on the day of the Beer Game (see below) and will constitute 2% of your final grade. The remaining 3% are earned by speaking up in class, either by asking, answering questions and/or commenting on the material. Students are expected to prepare before class when a case is to be discussed. 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.

Evening Class: Beer Game

An (mandatory) evening class will be held (tentatively) on **[TBA] from 6:00 to 8:00pm**. "The Beer Game" is a popular, entertaining and educational activity; its purpose is to introduce students to one of most crucial issues in Supply Chain Management (unfortunately it has nothing to do with beer!). Please contact me immediately if there is a scheduling conflict.

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 and/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	Readings	Hws
1	Jan 19 W	Introduction to Operations Management		
2	Jan 24 M	Process Analysis: Process capacity and bottleneck analysis	3.1-3.2	
3	Jan 26 W	Process Analysis: Process capacity and bottleneck analysis (case analysis)	Case: Kristen's Cookie Co.	HW1
4	Jan 31 M	Process Analysis: Flow analysis	2.1-2.3; 3.4-3.5; 4.1	
5	Feb 2 W	Process Analysis: Line balancing	4.2-4.5	HW2
6	Feb 5 M	Process Analysis: The face game	2.6	
7	Feb 9 W	Process Analysis: Process design issues	Case: Benihana	HW3
8	Feb 14 M	Process Analysis: Setup times and batching	6.1-6.3	
9	Feb 16 W	Review session		HW4
10	Feb 21 M	Midterm I		
11	Feb 23 W	Project Management: Introduction	(slides only)	
12	Feb 28 M	Project Management: Crashing	(slides only)	
13	Mar 2 W	Queueing Theory: Introduction	7.1-7.2; 7.5-7.6	HW5
14	Mar 7 M	Queueing Theory: Managing queueing systems	7.7-7.11	
15	Mar 9 W	Queueing Theory: Application	Case: UHS	HW6
	Mar 14 M	[Spring Break]		
	Mar 16 W			
16	Mar 21 M	Quality Management: Statistical Process Control	9.1-9.5	
17	Mar 23 W	Quality Management: Toyota Production System	10.1-10.6 Case : Toyota + 2 news articles	HW7
18	Mar 28 M	The Goal	Book: The Goal	HW8
19	Mar 30 W	Review session		
20	Apr 4 M	Midterm II		
21	Apr 6 W	Inventory Management: Economic Order Quantity	6.4-6.5	
22	Apr 11 M	Inventory Management: Newsvendor Model	11.1- 11.4 [†]	
23	Apr 13 W	Inventory Management: Newsvendor Model	11.5, 11.7	HW9
	Apr 18 M	No class		
24	Apr 20 W	Inventory Management: Order-up-to Model	13.1, 13.2, 13.5, 13.7	HW10
25	TBA*	Supply Chain Management: Beer Game		
26	Apr 25 M	Supply Chain Management: The bullwhip effect	16.1-16.2	HW11
27	Apr 27 W	Revenue Management: Introduction	15.1-15.4	
28	May 2 M	Revenue Management: Application	Case: Cambridge SC	HW12
29	May 4 W	Review session		
30	TBA	Final exam		

[†] You may skip from the 2nd last paragraph of p224 to the 2nd last paragraph of page 230.

* Mandatory evening class.

OM 335: Course contract

Please **initial** every rule then sign and date.

I have read and understood the syllabus for OM335 (unique number 03970). Specifically, I am aware of the following rules:

- I can only discuss my grade on a homework assignment with the TA for one week after the graded assignments have been returned in class.
- I can only discuss my grade on a 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.
- Attendance to the beer game is required and worth 2% of my final grade.
- I have to let the instructor know well in advance if I cannot come to the beer game.
- 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 homework 1 (for one point).

Date and Signature