

MGT 6350: Operations Management (Spring 2008)

Georgia Institute of Technology, College of Management

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Course Description:

In a dynamic, global, and competitive world, an understanding of the processes essential to delivering products and services to customers (i.e., matching supply with demand) is necessary to effect improvements in a company's critical competitive dimensions such as quality, cost, delivery, and flexibility. This course focuses on concepts related to the strategic and scientific management of these processes. The course comprises both instructional as well as case-based sessions, and features a semester-long group project involving applications of concepts discussed in class. Additional readings from the course pack will be used to supplement the cases and assigned textbook chapters. We will also treat the social and environmental implications of the production and delivery of products and services through selected readings.

Required Text:

Matching Supply with Demand: An Introduction to Operations Management (2006) by Gérard Cachon & Christian Terwiesch, McGraw-Hill/Irwin (ISBN-13: 978-0-07-291899-1, ISBN-10: 0-07-291899-3).

Other Required Materials:

- Course pack.
- The Goal (any edition) by Eliyahu M. Goldratt & Jeff Cox, North River Press.

Course Website:

We will use T-Square. Locate the course by logging in at <https://t-square.gatech.edu/portal>. Assignment submissions will be handled on T-Square. Therefore, late submissions will not be possible.

Office Hours:

Tuesdays & Thursdays 2:30-3:30pm, or by appointment (Room #478).

Grading: Final Grades will be based on a curve. Evaluation components include:

- Exam 1 (**February 26**): 20%
- Exam 2 (**April 15**): 20%
- Class Participation: 20%
- Case Write-Ups (2 Cases): 20%
- Project: 20%

Exams:

- Exams will be open book, open notes, and non-cumulative.
- You will require a calculator for every class and every exam, so carry one with you at all times.
- Please resolve any scheduling conflict or inform me of any circumstance in advance.

Class Participation:

I expect each of you to attend and be fully prepared for every class. Please be punctual, turn electronics off, and participate courteously. Please read *How to Discuss a Case* (HBS) included in your course pack.

Case Write-Ups:

- Groups of *three to five* members will provide written analyses of the following two cases. Each case write-up carries a weight of 10%:
 - Manzana Insurance – Fruitvale Branch (due by midnight on **Sunday, February 3**)
 - Sport Obermeyer (due by midnight on **Sunday, March 9**)

- Your analysis must address the question(s) summarized at the end of the case. The analysis can be up to five pages in length (plus up to five pages of exhibits).
- Grades for the case write-ups will be based on the quality and depth of analysis and the soundness of recommendations made.
- Please read *How to Write a Case-Based Essay* (HBS) included in your course pack.

Course Project:

The course project will showcase your understanding and application of Operations Management concepts. The project will require groups of *three to five* members to pick a company or an organization and critically analyze a specific operations activity or issue (e.g., a process, a capacity planning decision, etc.) using one or more of the concepts or ideas learnt in class. The project need not necessarily require the approval of the organization. The goal of the project is not so much the volume of information that you might process but rather how intelligently can you employ the concepts discussed in class in order to make sound recommendations. You should be able to come up with approximate yet logical numbers related to the monetary benefit from your recommendations.

- A two-page project proposal describing the problem being studied, and the concepts you plan to implement, will be due by midnight on **Sunday, February 3**. Groups will briefly introduce their project proposals in class on **Thursday, February 7**. Please also refer to the guidelines for the project proposal document, included below.
- Please arrange a meeting with me in the **first week of March** to provide an update on the progress of the project.
- The output of the project will be a report that will include an analysis of the problem(s) identified and recommendations for improvement. This report will be due by midnight on **Sunday, April 13** on T-Square. The report may be up to 15 pages in length (plus up to 10 pages of exhibits). I will make all projects accessible to the class via T-Square on **Monday, April 14**. Please also refer to the guidelines for the project report, included below.
- Groups will present their projects on one of the following dates (drawn by lots): **April 17 (Thursday)**, **April 22 (Tuesday)**, or **April 24 (Thursday)**, in class. Presentations should be crisp, focused on the crux of the issues being addressed, and should not exceed 15 minutes. We will have 5 minutes for Q&A after each presentation.
- The course project grade will be based on the quality of analysis demonstrated via your group's project report and presentation. Emphasis will be placed on demonstration of a clear understanding of concepts from the course and their appropriate application to the problem, and the soundness of recommendations made.

Project Proposal Guidelines:

Please include the following information in the project proposal:

- Name of the company/organization and particular facility to be studied and people contacted (if any).
- Basic description of what the organization does (i.e., products/services offered, customers/markets served, etc.)
- Basic description of the problem to be analyzed
- Brief outline of the approach and the concepts intended to be applied.

Final Report Format:

Please limit your report to 15 pages (plus up to 10 pages of exhibits). Please use the following framework to organize your group's report. You must properly reference information obtained through literature searches, observations, organizational records, interviews, etc.

- Executive Summary (1-2 pages): Briefly state the problem, your recommendations, and what you have accomplished through the project.
- Introduction and Background Information (3-4 pages): You may divide this section into the following subsections.
 - Industry Background: This subsection should provide the reader some information about the industry in which the organization competes or exists. It could include details such as competitive priorities, major competitors, and market shares.

- Organization Background: This subsection should focus on background information related to the organization, such as its size, location, and product or services portfolio.
- Facility (or Research Site) Background: This section should include details pertaining to the facility or specific site that your group investigated.
- Primary goals of the project and flow of rest of the report: You may briefly list the goals of the project and describe how the remainder of the report will flow.
- Current Situation and Problem Statement (4-5 pages):
 - Characterization of the Current Situation: In this subsection, a clear description of the current situation should be provided.
 - Problem Statement: You must describe the problems/issues associated with the existing activity. This sub-section will set the stage as to why you have undertaken the project and how your analysis and recommendations will serve to improve the performance of the organization or facility.
- Analysis and Recommendations (5-6 pages): In this section you will describe the steps that should be undertaken to improve the performance of the organization or facility. Estimate the chances of success and impacts on performance if your recommendations are implemented. Describe how the problem was analyzed and how recommendations were arrived at.
- Appendices: Please attach relevant exhibits, tables, and figures (not to exceed 10 pages).

For Your Calendar

Date(s)	Day	Activity/Assignment	Comment
January 10	Thursday	Beer Game	Class meets in Room #492 (Trading Floor Lab)
February 3	Sunday	1. Case: Manzana Insurance 2. Project Proposal	Due by midnight on T-Square
February 7	Thursday	Groups introduce Project Proposals	In class
February 26	Tuesday	Exam #1	In class, open book, open notes
First week of March	-	Arrange meeting with Ravi regarding Project	-
March 9	Sunday	Case: Sport Obermeyer	Due by midnight on T-Square
April 13	Sunday	Project Report	Due by midnight on T-Square
April 14	Monday	Ravi will make Project Reports available to all	On T-Square
April 15	Tuesday	Exam #2	In class, open book, open notes
April 17 April 22 April 24	Thursday Tuesday Thursday	Project Presentations	In class

Course Plan

Week	Date	Topic	Textbook Chapters	Case/WSJ Articles	Readings
1	1/8	Introduction & Course Outline			
	1/10	Beer Game Note: Class Meets in Trading Floor Lab (#492)		(Beer Game)	
2	1/15	Strategic Role of Operations Management	1, 2.6	<i>Wal-Mart Era Wanes Amid Big Shifts in Retail</i> <i>Retailers Face the Test of Testing</i> <i>Nintendo Plays it a Wii Bit Cautious</i> <i>Big Firms to Press Suppliers on Climate Change</i>	Operations-Based Strategy
	1/17				
3	1/22	The Process View & Process Analysis	2.1-2.4, 3		<i>Why Even Sunny Days can Ground Airplanes</i> <i>Seeking Sweet Savings</i> <i>Safety Issues Beset Industrial Laundries</i>
	1/24				
4	1/29	Process Analysis - Case		Kristen's Cookie Co.	
	1/31	Impacts of Variability	6, 7		Note on Variability, Buffers, and Inventory <i>How 8 Airports Bucked Trend in Late Arrivals</i> <i>Kidney Shortage Inspires a Radical Idea</i>
5	2/5	Variability in the Context of Service Operations - Case		Manzana Insurance - Fruitvale Branch	<i>Are Some Customers More Equal than Others?</i>
	2/7	Project Proposals by Groups			
6	2/12	Hedging against Uncertainty (Inventory Management)	2.5, 5, 11		<i>Where Has All the Oil Gone?</i> <i>Fujiya Chief Resigns</i>
	2/14				
7	2/19	Inventory Management - Case	12	HP DeskJet Printer Supply Chain	
	2/21	Balancing Excess and Shortage	9		<i>How GM Handles a Hit</i>
8	2/26	Exam #1			
	2/28	Capacity Management (Operations Planning & Revenue Management)	13		Ravi's MBA Project (1999) (Available on T-Square)

Week	Date	Topics	Textbook Chapters	Case	Readings
9	3/4	Revenue Management - Case		Blockbuster (within reading)	Turning the Supply Chain into a Revenue Chain
	3/6	Supply Chain Management & The Bullwhip Effect	14		<i>Auto Makers Wean Themselves from Costly Sales Incentives</i> <i>Western Grocer Modernizes Passage to India's Markets</i> <i>The Wal-Mart You Don't Know</i>
10	3/11	Supply Chain Management		Sport Obermeyer	<i>After Being Overhyped RFID Starts to Deliver</i>
	3/13	Lean Operations & Toyota Production System	8.9		Lessons from Toyota's Long Drive <i>Management by Stress</i>
11	SPRING BREAK				
12	3/25	Quality Management and Six Sigma	8		Six-Sigma: What Is It and How to Use It <i>Boeing Focuses on Dreamliner</i>
	3/27	Quality Management Case		Dabbawallah's at Mumbai	
13	4/1	Constrained Operations - Case		Mihocko, Inc.	<i>Values in Tension - Ethics Away from Home</i>
	4/3	Sustainable Operations			Green & Competitive It's Not Easy Being Green <i>Where Ecological & Economical Meet</i>
14	4/8	Sustainable Operations - Case		Interface's Evergreen Services Agreement	
	4/10	Reflections on the Role of Operations Management			
15	4/15	Exam #2			
	4/17	Project Presentations			
16	4/22	Project Presentations			
	4/24	Project Presentations			