MGT 6350: Operations Management
Fall 2012 (EM), Tuesdays 6:05-8:55pm, Room 203
Scheller College of Business, Georgia Institute of Technology
Instructor: Dr. Ravi Subramanian (ravi.subramanian@scheller.gatech.edu)

Course Description:
In a dynamic, global, and competitive world, an understanding of the processes and policies essential to delivering products and services to customers (i.e., matching supply with demand) is necessary to effect sustainable improvements in an organization's critical competitive dimensions such as cost, delivery, flexibility, and quality. This course focuses on concepts related to the strategic design and management of these processes and policies. The course comprises both instructional as well as case-based sessions, and features a group project involving applications of course concepts. Additional readings from the Wall Street Journal and other sources will be used to supplement the cases and assigned textbook chapters. We will also briefly treat the ethical and social implications of the production and delivery of products and services through selected readings.

Required Text:
Matching Supply with Demand: An Introduction to Operations Management (2nd Edition, 2009), by Gérard Cachon & Christian Terwiesch, McGraw-Hill/Irwin (ISBN: 978-0-07-352516-7).

Other Required Materials:
- Cases and Simulation to be purchased from http://cb.hbsp.harvard.edu/cb/access/14471249.
- Additional course material posted as a zipped folder on T-Square. Locate the course by logging in at https://t-square.gatech.edu
- The Goal (any edition) by Eliyahu M. Goldratt & Jeff Cox, North River Press.

— Obtaining or requesting any material (including used textbooks with markings, class notes, cases, readings, etc.) or any help from previous students will violate the Georgia Tech honor code and is not allowed. Likewise, sharing or offering to share any material with or otherwise helping future students of the course will violate the Georgia Tech honor code and is not allowed.

Office Hours:
By appointment (Room #478). Please email me, suggesting a few dates/times that work for you and we will work out a mutually convenient time. Email is the best way to get in touch with me.

Grading: Final grades will be based on a curve. Evaluation components include:
- Exam 1 **25%**
- Exam 2 **25%**
- Group Case Write-Up **15%**
- Class Participation **15%**
- Group Project **20%**

— Assignment submissions will be handled on T-Square. Therefore, late submissions will not be possible.
— Please submit the names of members of your group (four-six members per group) by 11:55pm on **Tuesday, August 28** (online survey link will be provided).
— Group evaluations – for you to evaluate individual contributions towards your group's work – will be conducted through an online survey towards the end of the semester.
— Please make re-grading requests for an evaluation component within one week of your receipt of the evaluation.

Exams:

- Exams are open book, open notes, and non-cumulative.
- Sharing of course material, notes, or the textbook is not allowed during the exams.
- You will require a calculator for every class and the exams, so please carry one with you at all times (sharing of calculators is not allowed during the exams).
- Please resolve any scheduling conflict or inform me of any circumstance in advance.

— Discussing the contents of an exam with students who have not yet or have already taken the exam (either within or outside of your section) will violate the Georgia Tech honor code and is not allowed.

Group Case Write-Up:

- Groups should submit a written analysis of <u>one</u> case out of the two marked with a (*) in the course plan. The case write-up carries a weight of 15% and is due by 11:55pm on T-Square, on the **Monday** just before the date when the case is scheduled to be discussed in class.
- Write-ups must address the assigned case questions posted on T-Square, and may be up to five pages in length (single-spaced, 11 point font, 1 inch margins), plus up to five pages of exhibits.
- Write-ups should be to-the-point and could either be organized based on the case questions or be written in essay form with the answers to the case questions contained within.
- Your group's grade for the case write-up will be based on the quality and depth of analysis and the soundness of recommendations made.

Class Participation:

I expect each of you to be prepared and ready to contribute for every class. Please be punctual, turn electronics off, and participate courteously. Please always occupy the same position in the classroom (to the extent feasible) and <u>always</u> place your name card/tent in front of you. While class attendance counts towards participation, habitual late arrivals or other distractions will more negatively influence the class participation grade in comparison to absence from class.

— <u>Laptop Policy</u>: Please do not use laptops/tablets/smartphones during class (also applies to the two project presentation sessions in Weeks #14 and 15). Exceptions to this policy are our Supply Chain Management Simulation session (Week #1) and the sessions on Operations Decisions under Constraints (Weeks #10 and 11).

Group Project:

The course project will involve a critique of the *economic* sustainability of any existing production, service, or monetary system that involves processes and policies to match supply with demand. The purpose of the project is to gain an appreciation as to the importance of keeping economic sustainability or robustness in mind when designing and managing processes and policies. The system to be critiqued could be based either on your group's structured interactions with an organization or company, or on articles from the media (e.g., using Factiva, etc.). The output of the project will be a report that will include a critique of existing processes and policies employed in the system and will provide focused recommendations for improvement or suggestions on the applicability of practices to other contexts.

— Groups must submit a brief presentation file (3-4 slides that will not be graded) of their project ideas and progress by 11:55pm on **Monday, September 24** on T-Square. These slides should very briefly touch upon:

i. Title/topic of the project,
ii. 3-4 main issues/questions that the group intends to address,
iii. Intended methodology for addressing the issues/questions, and
iv. Progress on the project.

— The project report is due by 11:55pm on **Monday, November 26** on T-Square. All project reports will be posted on T-Square soon after this deadline for all students to view.
    - Groups will present their projects in class on one of the following days **– Tuesday, November 27 or December 4** (presentation time slots will be randomly assigned ahead of time). Presentations should be crisp, focused on the crux of the issues being addressed, and should not exceed 15 minutes **(groups must submit a printout of the presentation slides at the start of class)**. We will have 5 minutes for Q&A after each presentation.
    - The course project grade will be based on the quality of analysis and soundness of recommendations evidenced through the project report and presentation.

— Project Report Format: Please limit your report to 10 pages (single-spaced, 11 point font, 1 inch margins), plus up to 10 pages of exhibits. Please use the following framework as a rough guide to organize your group's report. You must reference information obtained through literature searches, observations, organizational records, interviews, etc.
    - Executive Summary: Briefly describe the system being critiqued and state your findings and recommendations.
    - Introduction and Background Information:
        - System Background: This subsection should focus on background information related to the system, such as a description of the relevant "supply chain", products and/or services offered, and competitive priorities.
        - 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:
        - Characterization of Current Practices: In this subsection, a succinct description of current processes and policies in the system should be provided.
        - Problem Statement: You must describe the issues associated with or the potential attractiveness of existing practices in the system. This subsection will set the stage as to why you have undertaken the project and how your analysis and recommendations will be of value to the larger business audience.
    - Analysis and Recommendations: In this section you will describe, for example, the steps (process or policy changes) that could be undertaken to improve the economic sustainability of the system and/or whether and how observed or recommended sustainable practices can be implemented in other contexts.
    - Appendices: Please attach relevant exhibits, tables, and figures (not to exceed 10 pages).

Georgia Tech Honor Code: Students are expected to act and must expect their peers to act according to the highest ethical standards, as outlined in the honor code at www.honor.gatech.edu. The marking of attendance for anyone other than the person himself/herself constitutes a significant violation of the instructor's and your colleagues' trust and also the honor code. For questions involving honor code issues, please get in touch with me or visit www.honor.gatech.edu.

For Your Calendar

Date	Day	Activity/Evaluation Component	Comments
August 21	Tuesday	Supply Chain Simulation	Bring laptop to class
August 28	Tuesday	Submit names of group members	Due by 11:55pm, Use survey link
September 17	Monday	**Case Write-up: Manzana (*)**	Due by 11:55pm on T-Square
September 24	Monday	(Milestone, not graded) Submit presentation file (3-4 slides) of your group's project idea and progress	Due by 11:55pm on T-Square
October 2	Tuesday	**Exam #1**	In class, open book, open notes
October 29	Monday	**Case Write-up: Sport Obermeyer (*)**	Due by 11:55pm on T-Square
October 30, November 6	Tuesday	Sessions on Operations Decisions under Constraints	Bring Laptop to Class
November 20	Tuesday	**Exam #2**	In class, open book, open notes
November 26	Monday	**Project Report**	Due by 11:55pm on T-Square
November 27, December 4	Tuesday	Project Presentations (Groups will be randomly assigned to 20 minute time slots on these dates; Please submit a printout of the presentation slides at the start of class on the date when your group's presentation is scheduled)	In class **(No laptop policy and Class Participation continues to apply)**

Note: Case write-up is due for <u>one</u> out of the two cases marked with a (*).

Detailed Plan for Class Sessions

Week	Date	Topic	Textbook Chapters	Case/*Articles*	Readings
1	08/21	Introduction & Course Outline			
		Supply Chain Simulation (HBSP) **(Bring Laptop to Class)**			
2	08/28	Strategic Role of Operations Management	1, 2.6	*Now Arriving on Time: Your Flight and Suitcase (04-3)* *Stores Anxiously Watch Back-to-School Sales (08-1)*	Operations-Based Strategy
3	09/04	The Process View & Process Analysis	2.1-2.4, 3		*Iraq Tackles Its Next Oil Bottleneck* *Massey's CEO Defends Its Safety Practices*
4	09/11	Process Analysis – **Case**		Kristen's Cookie Co. (HBSP)	
		Impacts of Variability	7.1-7.6, 7.9-7.12, 8	*Why Even Sunny Days can Ground Airplanes* *Now Arriving on Time: Your Flight and Suitcase* *The Meat Market*	Note on Variability, Buffers, and Inventory
5	09/18	Variability in Service Operations – **Case**		**Manzana Insurance – Fruitvale Branch (*)** (HBSP)	*Life Insurers Pressed on Lost Policies*
		Inventory Management	2.5, 6		
6	09/25	Inventory Management	13.1-13.4		*Working Capital and Supply Chain* *CVS Accused of Selling Expired Products*
7	10/02	Inventory Management – **Case**	14	HP DeskJet Printer Supply Chain (HBSP)	
		Exam #1			
8	10/09	The Newsvendor Model – Balancing Excess & Shortage	11.1, 11.2, 11.4-11.8 13.7		*Stores Anxiously Watch Back-to-School Sales*
		Capacity Management (Operations Planning & Revenue Management)	15		Ravi's MBA Project (1999)

Week	Date	Topics	Textbook Chapters	Case/*Articles*	Readings
9	10/23	Supply Chain Coordination through Financial Mechanisms	16.3-16.5	The Case of Blockbuster Video	*Which is Better - Outsourcing or Shared Services* *Lobster Glut Slams Prices*
		The Bullwhip Effect & Supply Chain Coordination through Information	16.1,16.2		*Bullwhip Hits Firms as Growth Snaps Back* *Clarity is Missing Link in Supply Chain* *Samsung Galaxy Tab Sales Not As Fast As Expected*
10	10/30	Supply Chain Management – **Case**		**Sport Obermeyer (*)** (HBSP)	
		Operations Decisions under Constraints **(Bring Laptop to Class)**			Using Solver in Excel *Business Fumes over Carbon Dioxide Rule* *Court Backs EPA on Warming* Values in Tension
11	11/06	Operations Decisions under Constraints – **Case**		Mihocko, Inc.	
		Lean Operations & Toyota Production System	10		*Latest Starbucks Buzzword: 'Lean' Japanese Techniques* Management by Stress
12	11/13	Quality Management & Six Sigma	9		*Where Process-Improvement Projects Go Wrong* *The Biggest Blood Supply Risk: Tainted Platelets* *BP Decisions Set Stage for Disaster*
		Sustainable Operations			Green and Competitive It's Not Easy Being Green
13	11/20	**Exam #2**			
		(Buffer time)			
14	11/27	**Project Presentations**			
15	12/04	**Project Presentations**			

Notes:
1. A case write-up is due for <u>one</u> out of the two cases marked with a (*)
2. Highlighted readings relate to ethical/social issues