MGP 252: Managing for Operational Excellence

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Class Schedule: Saturday 9am-12pm, 1pm-4pm CHT-1341
Office Hours: Saturday 4pm-5pm or by appointment

Course Description

Operations management is concerned with the production and delivery of goods and services to meet customers' demands. It is one of the central functions of every business, government agency, and non-for-profit organization. Operational excellence can provide an important competitive advantage for firms in today's marketplace. It has long been realized that the operations must integrate into the overall corporate strategy and planning to achieve such an advantage. Therefore, a solid understanding of operations management is important for all managers, and a working knowledge about the operations function of a firm is an integral part of your MBA education.

The objective of this course is to study the core concepts in operations management. Successful companies must be able to develop and manage efficient business processes that are capable of delivering high-quality products and services to meet their ever-changing customer demands in a timely and cost-effective manner. We thus can view operations management as the design and management of effective business processes. This course focuses on a number of concepts and techniques for analyzing and improving process performance. Through critical analysis of business processes, you will gain a good understanding of the major issues that are critical to the management of both manufacturing and service operations.

This course provides a blend of qualitative and quantitative treatment for understanding process performance and operations issues. A combination of lectures, cases, videos and in-class exercises will be used to convey the basic concepts.

Course Materials

Packet of cases and readings (*Harvard Coursepack*):

1. Shouldice Hospital Limited (HBS, 9-683-068)
2. Kristen's Cookie Co. (A) (Abridged) (HBS, 9-608-037)
3. Toyota Motor Manufacturing, U.S.A., Inc. (HBS, 9-693-019)
4. Apple Inc.: Managing a Global Supply Chain (HBS, W14161)
5. What Is the Right Supply Chain for Your Products? (HBS, 97205 HBR article)
   This item is available through the library but will need to be searched for directly. This link takes you to the HBR page of the library. Click on "Search within this publication" and then search for "AN 9705150574" in the second field.

Optional Textbook: *Matching Supply with Demand: An Introduction to Operations Management* by Cachon and Terwiesch, McGraw-Hill/Irwin, 3rd edition 2012. ISBN-10: 0073525200 ISBN-13: 978-0073525204.
You might rent the textbook from Amazon or other vendors. It is ok to use previous editions.

Grading

Individual Homework (3 @ 5%)	15%
Quiz (3 @ 3%)	9%
Group Case (2 @ 8%)	16%
Group Project	15%
Class Participation	5%
Final Exam	40%

All assignments are submitted online. Students will form a group, up to 4 members, before the end of the first week. The members of each group are jointly responsible for the group assignments. At the end of the quarter, you will be asked to evaluate the contributions of your teammates; these evaluations will influence students' grades.

Quiz (open-book, open-notes)
There are in total four short quizzes, one on Little's Law and queuing, one on inventory models, one on quality management (the Toyota case) and one on supply chain management (the Apple case). Quizzes are open-book, open-notes. **Your lowest quiz will be dropped** (i.e., only the three highest quizzes will enter the calculation of your overall course grade). Quizzes will be conducted on Canvas (**please bring laptop**).

Group Case
The group case report should answer the questions assigned with the case. Each group submits one copy.

Group Project
Each group is required to observe, analyze and critique an operation/process of your choice. The operation of interest can either be a manufacturing or service process.

Guidelines:
1. The operation must be local, so that all of the team members can observe the operations in action.
2. Pick an operation of reasonable size: A one-person operation is too small to learn, or the logistics operation of Wal-Mart is too large and complicated to analyze.
3. Narrow the scope to one or two key operations issues: Why the firm has so much inventory or how can the firm deliver its order in such a small timeframe?
4. Learn from either the good or the bad: The operation can be in chaos where the team studies the associated challenges, or the operation can be a best practice, where the team studies the tricks to achieve operational excellence (or most likely, somewhere in between).
5. Identify some quantifiable measures to evaluate the operational performance. Understand what aspects of the operation drive the underlying performance.
6. Suggest ways to improve the underlying operation and discuss any implementation challenges.

Each group is required to submit a one-page project proposal in **Session 6**. A written report is due in class in **Session 10.** Your report will be graded on its professionalism, in addition to its content. It must be clear, concise, and well-organized. The report should be **no more than 6 double-spaced pages**, plus exhibits. Make good use of exhibits such as tables and figures to support your analysis wherever appropriate.

Class Participation
In-class participation requires you to be active and participate in class. The class participation grade is based on the quality of each student's contribution. Good questions, relevant experiences, points that build on previous points and insights into the business issue under discussion are the best forms of participation.

Final Exam
The final exam is closed-book, closed-notes, closed-computer. You can consult a one page "cheat sheet" (double sided ok). There is no make-up exam.

CODE OF ACADEMIC CONDUCT: We are committed to the promotion of absolute integrity and high ethical standards in academic work. More information about Code of Academic Conduct at Code's webpage.

MGP 252 Course Schedule (subject to change)

Session	Date	Topic	Assignment Due
1	4/4	Introduction, Syllabus Strategy and Operations, Inventory Turns, Little's Law (Optional) Textbook: Ch. 1, 2.2-2.4, 2.6	
2	4/4	Strategy and Process Choice Process and Capacity Analysis, Bottleneck (Optional) Textbook: Ch. 3.1-3.4	Form a group
3	4/18	Case: Shouldice Hospital Process Variability: Waiting Time Problems Variability on Process Performance (Optional) Textbook: Ch. 8	HW #1 (Little's Law) Group Case: Shouldice Hospital
4	4/18	Process Variability: Waiting Time Problems (Cont'd) Inventory Management (EOQ) (Optional) Textbook: Ch. 2.5, 7	
5	5/2	Quiz#1 (Little's Law, Inventory Turns, Queueing) Inventory Management (EOQ) (Cont'd) (Optional) Textbook: Ch. 2.5, 7 Case: Kristen's Cookie	HW #2 (Capacity Analysis, Waiting Time) Group Case: Kristen's Cookie
6	5/2	Newsvendor Model and Forecasting (Optional) Textbook: Ch. 12.1-12.5, 12.7	Group Project Proposal
7	5/16	Quiz#2 (inventory models) Managing Process Quality (Optional) Textbook: Ch. 10	HW #3 (EOQ, Newsvendor)
8	5/16	Quiz#3 (Toyota) Case: Toyota Motor Manufacturing, U.S.A. Lean operations, JIT and MRP/ERP (Optional) Textbook: Ch. 11	
9	5/30	The Beer Game (bring your laptop) Supply Chain Management HBR Article: What Is the Right Supply Chain…? (Optional) Textbook: Ch. 17.1-17.2	
10	5/30	Quiz#4 (Apple) Case: Apple's Global Supply Chain Contract Manufacturing, Future of Operations	Group Project Report
11	6/6	Final Exam (1pm-4pm)	