

BA 380N: OPERATIONS Management

Fall 2011

SYLLABUS

Rev. August 8, 2011

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COURSE DESCRIPTION

Operations Management involves those aspects of your firm that provide the goods or services in your firm's value proposition to your targeted market. As such, operations will be decisive in determining the long-term viability of your firm's business model. This fact has become even clearer in recent years as competition has increased with more globalization and improved information technology. By integrating operations successfully into their business models, firms such as Dell, Toyota, and Wal-Mart have shown that good operations make good business sense.

The objective of this course is to provide you with an understanding of Operations Management and the role that it plays within an organization. By the end of the course, you should have developed an appreciation for the challenges in providing world-class products and services and the ability to use some analytical tools and conceptual frameworks to guide your thinking about operations. It is important to realize that much operations consists of the *systematic* design, operation, control and improvement of business processes. Accordingly, you should leave this course able to:

- Integrate operational perspectives into a successful business model;
- Analyze key business processes;
- Understand how variability impacts processes;
- Rigorously improve business processes (including identifying the likely impact of information technology);
- Discuss some recent operations trends at a high level.

TEACHING/LEARNING METHODOLOGY

This course is a mixture of lectures and case-discussions. The primary readings for the class are a course reading packet of Notes, Articles, and Cases from such schools as the Harvard Business School.

For most sessions, there will be copies of class overheads downloadable from the course website on my website (www.EdAnderson.org) which is accessible from Blackboard. The individual homework sets and the group assignment will also be on this website.

A list of topics, readings for than topic, and other notes for each session follows later in the syllabus. This is summarized in a course outline at the end of this document, which also includes a list of the homework assignments. Please read and prepare your assignments 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.**

Feedback You and I will work together to create the best learning environment we can. Your informal feedback is very important to me. Please let me know throughout the semester if there is anything I can do to make this class better for you

PERFORMANCE EVALUATION

The performance criteria are weighted as follows:

Homework	25%
Class participation (emphasis on cases)	5%
Quiz I	20%
Quiz II	20%
Final	30%

The expected course grade distribution is: $A \leq 30\%$; grades lower than $B \leq 10\%$. Grades lower than B will be assigned on a case by case basis. Pluses and minuses will be distributed as is reasonable to comply with the MBA Program Office Policy respecting Core MBA Courses. **The recommended grade point average for this course by the MBA Program Office is 3.4 plus/minus 0.05.**

Homework

The purpose of homework assignments is to provide learning reinforcement and promote class preparedness. You will find that the homeworks provide excellent learning feedback and are a confidence-building tool. The assignments will also help with your preparation for the exams. Homeworks sets are downloadable off the website.

You will turn in your homework as individuals. For these assignments, you are encouraged to work with other students. However, unless directed, the solution that you turn in must be your own – photocopies are not accepted. Each question on an individual homework assignment will be graded on a scale of from 0 to 2 points. Each problem in the solution showing evidence of an effort at completeness will earn 2 points. An incomplete solution will earn 1 point. However, all individual homework assignments will be normalized at the end of the semester, so that they each count equally towards your grade.

Please study each solution carefully even if you received full credit on the assignment. Remember that credit on homework is proportional to effort not correctness.

All assignments are due at the beginning of class on the date listed in the course outline at the end of this syllabus. No late assignments will be accepted.

Class Participation To foster a productive learning environment, it is important that everyone come to class prepared and willing to contribute to discussion, **particularly on those days in which we discuss cases.** 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. Half of the points for class participation will be awarded by your peers, the other half by the instructor's notes.

Also, I would like to start each day with an analysis of a current article from the Wall Street Journal or some other periodical. Anyone who sends me an article that I use in class will receive extra credit in their class participation.

Quizzes & Final

The quizzes will cover materials from the class notes, readings, and assignments. Each quiz will have quantitative and qualitative responses. The split for each may, however, be weighed differently due to the topic material covered.

Each quiz is closed-book and closed-laptop. You will be allowed to bring in *one (1)* sheet of 8 1/2"x11" paper with you to the quiz with your formulas and notes. Any probability distribution or other tables will be provided with the exam, so you needn't waste your sheets on these details.

The final will be a take-home final. More details on its structure and due-date will be forthcoming in class.

Regrade requests

- a) If you wish a regrade a quiz, exam, or any other assignment, please return it and your **written statement** appealing its grading to my mailbox in CBA 5.202 within **SEVEN (7) CALENDAR DAYS** of:
 - i) For anything other than the final exam, the date that it is returned to you.
 - ii) For the final exam, the first class day of the semester immediately following your course.

After these seven days, I will consider all grades final unless they have been appealed. Please note that I have no control over the microeconomics portion of your grade and will assume that the score from your microeconomics professor is final once I receive it.

- b) If you decide to appeal your exam grade, prepare a **brief written statement** explaining what aspects of the grading on your exam or assignment are incorrect. Be sure to document your reasons by documenting mistakes in the grading of your exams questions or errors in point calculations. (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.)
- c) Submit the written statement together with the exam to my mailbox in CBA 5.202. I will consider your request and give you my decision in writing.

Logistics

Attendance at each class session is expected unless otherwise noted. If you are unable to attend a class on a given day, please check with your classmates to find out whether any in-class announcements were made. **Please use e-mail for questions wherever feasible versus the telephone.**

HONOR CODE

Honor Code Purpose

Academic honor, trust and integrity are fundamental to The University of Texas at Austin McCombs School of Business community. They contribute directly to the quality of your education and reach far beyond the campus to your overall standing within the business

community. The University of Texas at Austin McCombs School of Business Honor System promotes academic honor, trust and integrity throughout the Graduate School of Business. The Honor System relies upon The University of Texas Student Standards of Conduct (Chapter 11 of the Institutional Rules on Student Service and Activities) for enforcement, but promotes ideals that are higher than merely enforceable standards. Every student is responsible for understanding and abiding by the provisions of the Honor System and the University of Texas Student Standards of Conduct. The University expects all students to obey the law, show respect for other members of the university community, perform contractual obligations, maintain absolute integrity and the highest standard of individual honor in scholastic work, and observe the highest standards of conduct. Ignorance of the Honor System or The University of Texas Student Standards of Conduct is not an acceptable excuse for violations under any circumstances.

The effectiveness of the Honor System results solely from the wholehearted and uncompromising support of each member of the Graduate School of Business community. Each member must abide by the Honor System and must be intolerant of any violations. The system is only as effective as you make it.

Faculty Involvement in the Honor System

The University of Texas at Austin McCombs School of Business Faculty's commitment to the Honor System is critical to its success. It is imperative that faculty make their expectations clear to all students. They must also respond to accusations of cheating or other misconduct by students in a timely, discrete and fair manner. We urge faculty members to promote awareness of the importance of integrity through in-class discussions and assignments throughout the semester.

Expectations Under the Honor System

Standards

If a student is uncertain about the standards of conduct in a particular setting, he or she should ask the relevant faculty member for clarification to ensure his or her conduct falls within the expected scope of honor, trust and integrity as promoted by the Honor System. This applies to all tests, papers and group and individual work. Questions about appropriate behavior during the job search should be addressed to a professional member of the Career Services Office. Below are some of the specific examples of violations of the Honor System.

Lying

Lying is any deliberate attempt to deceive another by stating an untruth, or by any direct form of communication to include the telling of a partial truth. Lying includes the use or omission of any information with the intent to deceive or mislead. Examples of lying include, but are not limited to, providing a false excuse for why a test was missed or presenting false information to a recruiter.

Stealing

Stealing is wrongfully taking, obtaining, withholding, defacing or destroying any person's money, personal property, article or service, under any circumstances. Examples of stealing include, but are not limited to, removing course material from the library or hiding it from others, removing material from another person's mail folder, securing for one's self unattended items such as calculators, books, book bags or other personal property. Another form of stealing is the duplication of copyrighted material beyond the reasonable bounds of "fair use." Defacing (e.g.,

"marking up" or highlighting) library books is also considered stealing, because, through a willful act, the value of another's property is decreased. (See the appendix for a detailed explanation of "fair use.")

Cheating

Cheating is wrongfully and unfairly acting out of self-interest for personal gain by seeking or accepting an unauthorized advantage over one's peers. Examples include, but are not limited to, obtaining questions or answers to tests or quizzes, and getting assistance on case write-ups or other projects beyond what is authorized by the assigning instructor. It is also cheating to accept the benefit(s) of another person's theft(s) even if not actively sought. For instance, if one continues to be attentive to an overhead conversation about a test or case write-up even if initial exposure to such information was accidental and beyond the control of the student in question, one is also cheating. If a student overhears a conversation or any information that any faculty member might reasonably wish to withhold from the student, the student should inform the faculty member(s) of the information and circumstance under which it was overheard.

Actions Required for Responding to Suspected and Known Violations

As stated, everyone must abide by the Honor System and be intolerant of violations. If you suspect a violation has occurred, you should first speak to the suspected violator in an attempt to determine if an infraction has taken place. If, after doing so, you still believe that a violation has occurred, you must tell the suspected violator that he or she must report himself or herself to the course professor or Associate Dean of the Graduate School of Business. If the individual fails to report himself or herself within 48 hours, it then becomes your obligation to report the infraction to the course professor or the Associate Dean of the Graduate School of Business. Remember that although you are not required by regulation to take any action, our Honor System is only as effective as you make it. If you remain silent when you suspect or know of a violation, you are approving of such dishonorable conduct as the community standard. You are thereby precipitating a repetition of such violations.

The Honor Pledge

The University of Texas at Austin McCombs School of Business requires each enrolled student to adopt the Honor System. The Honor Pledge best describes the conduct promoted by the Honor System. It is as follows:

"I affirm that I belong to the honorable community of The University of Texas at Austin Graduate School of Business. I will not lie, cheat or steal, nor will I tolerate those who do."

"I pledge my full support to the Honor System. I agree to be bound at all times by the Honor System and understand that any violation may result in my dismissal from the Graduate School of Business."

McCombs Classroom Professionalism Policy

The highest professional standards are expected of members of the McCombs community. The collective class reputation and the value of the McCombs experience hinges on this.

Faculty are expected to be professional and prepared to deliver value for each and every class session. Students are expected to be professional in all respects. Classroom expectations of students include:

- Students will arrive on time.
- Students will be fully prepared for each class.
- Students will attend the class section to which they are registered.
- Students will respect the views and opinions of their colleagues. Disagreement and debate are encouraged. Intolerance for the views of others is unacceptable.
- Plagiarism will not be tolerated and will be dealt with severely.
- Phones and wireless devices are turned off.
- Laptops are closed and put away unless faculty require their use.

You are competing for the best faculty McCombs has to offer. Your professionalism and activity in class contributes to your success in attracting the best faculty to this program.

ADDITIONAL POLICIES

Students with Disabilities

Upon request, the University of Texas at Austin provides appropriate academic accommodations (SSD) is housed in the Office of the Dean of Students, located on the fourth floor for qualified students with disabilities. Services for Students with Disabilities floor of the Student Services Building. Information on how to register, downloadable forms, including guidelines for documentation, accommodation request letters, and releases of information are available online at <http://deanofstudents.utexas.edu/ssd/index.php>. Please do not hesitate to contact SSD at (512) 471-6259, VP: (512) 232-2937 or via e-mail if you have any questions.

BA 380N: READING ASSIGNMENTS AND CASE QUESTIONS

***PROCESS EFFICIENCY MODULE ***

SESSION 1 INTRODUCTION TO OPERATIONS MANAGEMENT and INTRODUCTION TO PROCESS ANALYSIS

Intensive Session #1

- Topics:
- What is operations management?
 - Why should we learn about it?
 - What is a business model?
 - How do we analyze the business processes that enable a business model?
 - When do process metrics mislead?

Readings: Process Fundamentals

Types of Processes

Matching Supply with Demand (Hereafter: MSWD): 3.1-3.2

Due: Nothing

SESSION 2 INTRODUCTION TO PROCESS ANALYSIS (CONT.) & INTERMEDIATE PROCESS ANALYSIS

Intensive Session #2

- Topics:
- How do we find a bottleneck and flowtime in complex processes (shared resources & parallel operations)?
 - Is there a trade-off between process quality, timing, and cost?
 - What are some heuristics for improving process ROI?
 - What is the relationship between a process's design and its cost, quality, and timing?
 - How much process complexity is beneficial?

Readings: MSWD: 2.1-2.2; 3.4-3.6; 4.1-4.3

Case: **Kristen's Cookies Case**

Due: Homework 1

SESSION 2.5 OPERATIONS STRATEGY IN SERVICES

Intensive Session #3

- Topics:
- What is the relationship between flowtime, inventory, and thruput?
 - How does the business model influence the design of business processes?
 - How does designing a process to exploit short flowtime and limited menus improve ROI?
 - Are these principles of improving process ROI universal or particular?

Case: **Benihana Case**

Due: Homework 2

SESSION 3 COST ANALYSIS

August 26-27

- Topics:
- Does the cost structure of a business model influence risk?
 - How does a firm's risk preferences interact with the firm's cost structure to influence the business model?
 - How do we identify the costs (and their associate risks) of a business model?
 - How do we improve a business model?

Readings: Breakeven Analysis & Operating Leverage

Note on Business Model Analysis for the Entrepreneur

MSWD: Finish Chapter 4, Skim Chapter 5

Case: **Zipcar: Refining the Business Model**

Due: Homework 3

SESSION 4 Quiz I & BASIC PROCESS VARIABILITY ANALYSIS

September 9-10

Topics: - How does demand and supply variability impact process management?
- When is it cost-effective to use inventory to manage demand & supply variability?
- Does it matter whether we use LIFO or FIFO to manage inventory?

Notes: Quiz I will be held during the first half of class and will cover material through and including Session 3.

Readings: A Note on Basic Process Variability Analysis

Exercise: We shall do the Fishing Fleet Exercise in class.

Due: Homework 4 (This will be short)

*****PROJECT MANAGEMENT MODULE*****

SESSION 5 PROJECT MANAGEMENT: Intro, Scoping & Work-Breakdown Structures

September 23-24

Topics: - When can we best manage risk during a project?
- How do we create schedules and budgets?
- Are estimates points or probabilistic distributions?
- How do we incorporate risk concepts into schedules and budgets?

Readings: Fast Forward MBA in Project Management, chaps. 1, 4, and 6

Jacobs and Chase Chapter on Project Management

Concentrated Solar Power Case (for homework)

Notes: BRING YOUR LAPTOPS TO CLASS.

Due: Homework 5

SESSION 6 PROJECT MANAGEMENT: Risk Management & Execution & Current Topics

October 7-8

Topics: - Are there different “types” of risk?
- How do we manage project risk during planning?
- How do we measure if a project is on time and budget?
- What do we do when things go wrong during project execution?

Readings: Fast Forward MBA in Project Management, chaps. 5 and 12

Project Leadership in Action Exercise

Notes: BRING YOUR LAPTOPS TO CLASS

Due: Homework 6

SESSION 7 Quiz II & MANAGING RISK: INVENTORY POLICY

October 21-22

Topics: - How do we quantify and manage the risk of uncertain demand?
- What are the costs of using inventory to reduce risk?

Readings: MSWD: 9.1-9.5, 11.1- 11.5[†], 11.6-11.7 ([†]You may skip from the 2nd last paragraph of p224 to the 2nd last paragraph of page 230.)

Notes: Quiz II will be held during the first half of class

Due: Homework 7 (this is a short homework)

*****MANAGING PROCESS RISK MODULE*****

SESSION 8 MANAGING PROCESS RISK: INFORMATION TECHNOLOGY-LED PROCESS IMPROVEMENT & STATISTICAL PROCESS CONTROL

November 4-5

- Topics:
- What is the goal of process improvement?
 - How should IT influence process improvement?
 - What are the advantages of different types of process improvement?
 - How do you tell from uncertain data when a process actually improves?

Readings: Statistical Process Control: An Introductory Note (on web)

Case: Zara: IT for Fast Fashion

Due: Homework 8

SESSION 9 MANAGING PROCESS RISK: CONTINUOUS PROCESS IMPROVEMENT IN THE SUPPLY CHAIN

November 18-19

- Topics:
- What methodology and tools are used to systematically reduce process risk?
 - How do you leverage the supply chain to reduce process risk?

Readings: SPC: An Introductory Note (on Web)

Statistical Quality Control for Process Development

Decoding the DNA of the Toyota Production System

Lean Six-Sigma for Service, chaps 1 & 2 (skim)

MSWD: 10 (all)

Cases: Toyota Motor Manufacturing, USA, Inc.

Quality Wireless (A) & Quality Wireless (B) (Note: These are short mini-cases for the homework)

Due: Homework 9

SESSION 10 MANAGING PROCESS RISK: SUSTAINABILITY IN THE SUPPLY CHAIN

December 2-3

- Topics:
- How can we leverage process improvement and supply chain concepts to increase sustainability?

Case: Wal-Mart's Sustainability Strategy

Notes: We will review for the final (which is a take-home exam) and distribute it in class.

Due: Homework 10