

EM 353***OPERATIONS MANAGEMENT*****SPRING 2012**

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SECTION 1: COURSE CONTENT AND STRUCTURE**1.1 - TEXTBOOK AND REQUIRED MATERIALS**

REQUIRED: Jacobs. Operations & Supply Management: The Core, ISBN 0-07-340333-4 Edition 2

Custom Case Book

Eliyahu Goldratt and Jeff Cox. *The Goal: A Process of Ongoing Improvement*. Croton-on-Hudson: North River Press, 2004.

1.2 - COURSE OBJECTIVES, LEARNING OUTCOMES, AND ASSESSMENT

This course provides an introduction to the topics and mathematical techniques for solving problems in the design, planning, and controlling of manufacturing and service operations and quality. Specifically, the course develops your knowledge of manufacturing and service resources planning and provides knowledge on forecasting, production planning, master scheduling, material requirements planning, capacity planning, world class manufacturing principles, and continuous improvement. Your comprehension of these topics is reinforced through three team case analyses.

In achieving these objectives and serving you as a student, I will endeavor to establish an educational process that effectively and efficiently provides the product characteristics (structure, content, and knowledge) necessary to develop your awareness of the significance, principles, and terminology of the functional area of production and operations management. It will cover *global and technological issues* in the management of world-class operations.

1.3 – PEDGAGOGICAL PHILOSOPHY AND EXPECTATIONS

Operations management represents a major functional area within any manufacturing or service business, and this course will provide you with the fundamental principles for managing operations planning and control systems. It is hoped that you will find these operations topics, techniques, and terminology stimulating and relevant to your education and future business careers. I shall endeavour to create a relaxed and open environment for your participation in the classroom. I shall encourage you to provide examples from your own readings and experiences on operations management topics, and hopefully, you will feel comfortable to approach me with any issues or problems that you are confronting in the course. I expect you to be prepared for class and to actively participate in class discussions and supporting your team during the Operations Case Analyses.

1.4 - TEXTBOOK & CASE READINGS

The sequence of topics and the reading assignments for those topics are stated in the course outline. Students should read and comprehend the chapter assignments *prior* to the lecture for that topic.

The Jacobs textbook consists of chapters outlining the conceptual framework for the lecture topics, but my lectures are compiled from numerous textbooks, articles, and personal observations of manufacturing firms. The Jacobs text is intended to provide you with an overview of the topics and is not a replacement for attending and *actively* participating in the lectures. The Goldratt and Cox text *The Goal* is a realistic, though fictional account of Alex Rogo and his team efforts to implement new manufacturing principles in the Bearington factory of the Unico Company. It is an exciting, non-technical narrative that has been recommended by many business and manufacturing managers as required reading for students.

Finally, the Case book consists of a series of excellent cases that we will utilize in class and for the team case analyses assignments. It is crucial that you read these carefully and well in advance of class so you can actively participate in class discussions and team assignment.

In conclusion, you should:

1. Read the assigned pages in Jacobs as described in the course outline
2. Start reading the Goldratt and Cox *The Goal* immediately
3. Carefully read the assigned cases well in advance of the due dates

1.5 - PROBLEM ASSIGNMENTS

The individual problem assignments are *not* collected or graded, but they represent a highly visible form of class participation, as I shall call upon several individuals to present their example problem solutions during class. You should always be prepared to respond to questions on these problems. In solving example problems, you can use either: 1) manual computations; or 2) computer software packages, such as Microsoft Excel. However, you should be aware that in-class examinations will require you to employ manual calculations; so do not rely simply on the computer software for solving problems.

1.6 – CASES: *Case Reviews & Team Integration Presentations*

Student teams will analyze 4 cases comprehensively using materials covered to date. All teams will analyze and prepare presentations based on a framework provided in class. In short, these presentations will introduce real life challenges faced by real organizations as they relate to operations and productions management. These cases will not only challenge your knowledge of operations and productions management, but also your analytical, critical thinking, presentations, and team development skills.

The cases will be presented in class by all groups.

Additionally, we will read and analyze 3 cases that will not be presented as teams, but rather as training for the team integration presentations. Although we will go over these cases together in class, you are expected to write a review paper for each case (single-spaced not to exceed 2 pages), where you provide a brief synopsis of the case, the main issues, symptoms, causes, your evaluation of the case, and possible recommendations that you would provide. These review papers are due in class as assigned by Dr. Braekkan.

1.7 - INDIVIDUAL CLASS PARTICIPATION

Classroom participation is NOT a component of your grade in this course. However, attending and participating in class is crucial to do well in this course. I have therefore generated the following guidelines for success in this course as it relates to participation based on my teaching experience:

1. Voluntary and reasoned responses to questions that I pose to either a specific individual or to the entire class. Failure to respond with an answer demonstrates a lack of preparation and participation.
2. A willingness to ask logical questions that either clarifies or extends the concepts under discussion.
3. Freely entering into case or example problem discussions to make a valid point, provide a different perspective, or respond to other student's questions or comments.
4. Volunteering to present your individual example problem solutions to the class through either discussion or representation on the board.
5. Regular attendance at class meetings. If you are unable to attend class, please let me know, if possible, ahead of time so I can acknowledge the reason(s) for your absence.
6. Use of office hours to obtain clarification about concepts and problems. If you have any problems in the course, please come and see me during office hours or arrange for an appointment.
7. Courteous and attentive behavior during class through the exhibition of interest and regard for the professor and your colleagues. Arriving late to class or disruptive talking during class indicate a lack of responsibility and concern for the classroom environment and your fellow students.

Remember that participation is not an act of opening yourself up for criticism but a sharing of your intelligence, ideas, and knowledge. Many students are hesitant to enter into classroom discussions, but since your future careers will require you to establish good verbal communication skills, it is best to overcome your inhibitions now in a more relaxed and controlled environment. I expect and strongly *encourage* you to ask questions during the lectures so that I can better serve and understand your educational needs and concerns.

1.8 - EXAMINATIONS

There will be two examinations during the course (including one comprehensive final examination) as scheduled in the *Course Outline*. The exams will emphasize the topics discussed in the lecture and textbook readings and problems. The exam will be short answer, essay, and problems, and they will cover the **cumulative** material up to the date of the exam. Since the amount of material covered in the course is extensive, the examinations will involve a randomly selected subset of the total cumulative material.

1.9 – INDIVIDUAL FORECASTING PROJECT

Forecasting techniques, coupled with complementing organizational processes, can be considered an organizational capability critical to firm performance. Forecasting, however, may be one of the least understood among the business decision making tools by managers at all organizational levels. In fact, many companies do not distinguish clearly between forecasting, planning, and decision making. Oftentimes

managers do not treat forecasting as an integral part of their organization's dynamic capabilities. You will each interview and sample three (3) managers charged with forecasting as a part of their job responsibilities and prepare a report on your findings. Each of you will distribute a questionnaire for the respondents (provided by me) to complete and then conduct a brief interview (either in person or over the phone) that you will design. You will need to locate the respondents yourself (this will challenge your networking skills). The respondents can work for the same organization, but they will have to be responsible for forecasting. You may not utilize individuals already used by other class members.

1.10 - GRADING POINTS AND DISTRIBUTION

Course grades are based upon the final distribution of total points; no letter grades are assigned to individual assignments or exams. Final course grades will be assigned based upon the following distribution:

Midterm Exam	20%
Final Exam	20%
Quizzes (6 out of 7)	10%
Individual Forecasting Project	8%
Case Reviews	6%
Case 1	8%
Case 2	8%
Case 3	10%
Case 4	10%
 TOTAL	 100%

1.11 - FINAL SUGGESTIONS AND COMMENT

This course outline is a detailed description of the topics and responsibilities of the professor and students. If you have any additional questions or issues concerning the course, please feel free to bring these up at any time during the academic term. I shall endeavor to the best of my ability to treat you fairly and respect your insights and comments in a responsible and courteous manner. Some final summary recommendations are:

1. Before each class, read and review the relevant chapters, cases, etc so you have an idea of the lecture or class structure and content.
2. Please use 1) my regular office hours; 2) call me at my office 7406; or 3) email braekkan@gustavus.edu whenever you have a problem or need help with a topic or assignment. Office hours have been structured to provide additional help outside class, and I trust that you will feel comfortable in utilizing this time reserved for you. If office hours are not convenient, please see me about setting up an appointment at a mutually agreeable time for additional help.
3. During the lectures, I shall attempt to detect when confusion exists or material has not been presented well, but please *stop* me as soon as you have any problems. I am confident that you are not alone in the possibility of failing to comprehend a topic, and I encourage you to help me realize when clarity in the lecture is lacking.

1.12 - TENTATIVE E/M 353 OPERATIONS MANAGEMENT OUTLINE

Week	Topics	Objectives	Readings	Assignments
1. Feb 6	Introduction	Course Organization, Structure of Topics, and Introduction to Operations and Supply Chain Mgmt. Strategy & Sustainability	Chapter 1 Chapter 2	
2. Feb 13	Strategic Capacity Production & Service Processes	Intro to Capacity Planning Theory of Processes I	Chapter 3 Chapter 4	Quiz 1
3. Feb 20	Production Processes	Theory of Processes I Intro to Case Study	Chapter 4 <i>American Connector Co</i>	Quiz 2
4. Feb 27	Service Processes	Theory of Processes II	Chapter 5	Quiz 3
5. Mar 5	<i>National Cranberry</i>			CASE 1 DUE
6. Mar 12	Quality	Develop understanding of Six Sigma	Chapter 6	
7. Mar 19	<i>Deutsche Allgem.</i>			CASE 2 DUE
8. Mar 26	Projects	Intro to Project Management	Chapter 7	Midterm Exam
9. Apr 9	Supply Chain Processes	Supply Chain Processes Theory	Chapter 9	Quiz 4
10. Apr 16	Supply Chain Processes	Supply Chain Processes Theory Application of Supply Chain Processes	Chapter 10 <i>Ford Motor Co</i>	Quiz 5
11. Apr 23	<i>Barilla SpA</i>			CASE 3 DUE
12. Apr 30	Supply & Demand Planning	Demand Management/Forecasting	Chapter 11	Quiz 6
13. May 7	Supply & Demand Planning	Sales & Operations Planning Theory & Inventory Control	Chapter 12 Chapter 13 <i>Madison Avenue</i>	Forecasting Project Due Quiz 7
14. May 14	<i>Sport Obermeyer</i>			CASE 4 DUE

SECTION 2: POLICIES OF EM 353 OPERATIONS MANAGEMENT

A course outline is essentially a contract outlining my responsibilities in terms of the lecture organization and content and your responsibilities on readings, assignments, and examinations. However, numerous areas of concern are not defined by simply stating general course objectives and organization. The following sections highlight additional policies that I have constructed to clarify any confusion in the details of the course and my teaching duties. Hopefully, these guidelines will improve your enjoyment and education in operations management.

2.1 - BACKGROUND ON OPERATIONS MANAGEMENT

Operations Management is a subject that combines the qualitative and quantitative aspects of business decisions and education. While the topic area may have minor appeal to you in your future career plans, the majority of U.S. manufacturing and service organizations are emphasizing the operations management function and demanding that managerial personnel comprehend the major significance of operations in the competitive success and strategies of the company. Failure by American managers to fully understand and appreciate the operations management function has contributed to the declining global competitiveness of U.S. businesses.

You will be required to learn and apply mathematical and team approaches to operations problems, but *do not forget* that your future success as a manager depends not only on knowing these methods but incorporating your experience and judgment on qualitative variables when making decisions. Your prospects in passing this course and gaining a solid knowledge base will require skills in intellectual abstraction, comprehension of mathematical and statistical techniques, commitment and dedication to team performance, and intense study. You should consider this course a *major* component of your degree and professional development, and one that will provide you with the techniques and terminology required to become an effective entrepreneur or company manager.

2.2 - CLASS ATTENDANCE AND PARTICIPATION

It is the student's responsibility to attend every class and when absent to obtain any missed information from fellow students. Any announcements made in class are assumed to have been disseminated to the entire class. Please be aware that verbal or written announcements in class may supersede information or deadlines stated in the course outline. If you are unable to attend class, please inform me in advance so I will know why you are not present for the lecture or topic discussion.

2.3- EXAMPLE CASE ANALYSES

In order to improve your professional presentation and general management skills, ALL GROUPS will follow a standardized case analysis format for the team assignments. I will provide a template for these assignments in class.

2.4 - LATE ASSIGNMENTS

Due dates for assignments are provided in the course outline or by myself during class. Plan to submit completed assignments by these due dates. A late assignment will receive a substantial reduction (**20 Points**) in the graded score.

2.5 - EXAMINATIONS

The date of the examination is given in the course outline. The format of the exams is problem solving, essay, and short answer. All material covered in lectures, required text readings, problem assignments, handouts, case studies, and assumed previous mathematical and statistical knowledge are subject material for the examinations. Logical extensions from these materials may also be included on the examinations.

Examinations in this course are long and difficult. You may have trouble answering every question, but remember that all students have the same amount of time for the exam. So please allocate your time carefully and attempt to answer as many questions as possible.

NOTE: *Examinations are not to be kept and must be returned at the end of the exam review class.* However, you are welcome to review your exam and the solutions during regular office hours.

2.6 - COURSE GRADES

Grades will be assigned based on total points relative to the rest of the class. Plus (+) and minus (-) grades may be assigned when the student is in the upper or lower ends of the grade bracket. Typically, the mean grade is a "B-" or slightly better depending on the class. "A" grades are only given to students who truly excel above the normal level, while "D" and "F" grades are given to those students who performed significantly below the class average. There is *no extra credit* work available or allowed for this course.

2.7 - ACADEMIC HONESTY AND HONOR CODE

As mature adults, it is expected that you have established a level of honesty, integrity, and honor that eliminates even the remote possibility of cheating on an examination and/or written assignments. Academic dishonesty or cheating consists of, but is not limited to the following set of conditions:

1. Unauthorized possession of examination material.
2. Possession of information sheets beyond the allowed notes.
3. Copying during examinations.
4. Looking directly at another student's examination.
5. Plagiarism or copying of assignments.

Cheating is *wrong* and *will not be tolerated*. Please try to maintain your academic standing, your character, and your reputation by not cheating.

2.8 - OFFICE HOURS

I take teaching, research, and industry interactions very seriously and like you, I require sufficient time to prepare class lectures and materials and to advance my research projects. If office hours are not practical because of your schedule, and you have a major concern, please contact me about setting up an appointment.

2.9 - FINAL COMMENT

After reading the course outline and policies, I assume that if you stay registered in the course that you have agreed to abide by and follow the procedures and policies stated above. My effort here is to eliminate any uncertainty that you might have on my decisions during the course and to provide you with a solid framework of understanding for the course. I will try to challenge and expand your thinking and knowledge in this course while also making it enjoyable; it is my sincere effort to provide a classroom environment that respects you as a student customer while increasing your business skills and knowledge. I hope that you will attend regularly and act professionally in meeting your responsibilities.