MBA 623 – Strategic Supply Chain and Operating Decisions (3 hrs.)
Spring 2010
Section 402, TR 18:00 – 20:45, CB206

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Course Description:
This course is designed to give an introductory survey of the management of a business’ operations function, covering the design, planning, and control of manufacturing and service operations. The focus is on strategic decision making in a cross-functional environment.

Prerequisites:
MBA 610 and MBA 612.

Required Textbook:

https://ebooks.prismonline.com/cgi/showebook.cgi?isbn=0390125393

Course Educational Objectives:
At the completion of this course, students should be able to do the following:

1. Describe the role of the operations function and the different types of manufacturing and service operations systems and methods found in modern business organizations.
2. Explain how operations strategy is formulated and linked to overall corporate strategy and how this strategy is important in achieving competitive advantage.
3. Describe accepted practices of good product design and the various manufacturing flow processes found in modern businesses.
4. Explain the unique characteristics of service businesses that present special challenges in managing these operations. Understand how to use queuing theory to analyze and improve queues in service businesses.
5. Describe the principles of Total Quality Management (TQM), and its implementation in a modern firm. Understand the basic concepts of Statistical Process Control (SPC); develop and interpret basic quality control charts for different example problems.
6. Understand how enterprise resource planning software can be used to help manage and integrate all functional areas in a modern firm.
7. Describe the aggregate planning process; formulate, analyze, and compare basic solutions to small problems.
8. Explain the fundamentals of inventory management for dependent and independent product demand. Apply basic models to solving simple example problems.
9. Explain the basic concepts and methods involved in Just-In-Time and Lean Production Systems.

Course’s Relationship to College of Business Learning Goals

1. **Students will be knowledgeable about current business practices and concepts.**
   Students will understand the functional areas of and interdisciplinary nature of business, and will be able to solve business problems utilizing current theory and practices. *Our textbook incorporates case studies and real-world examples, enabling students to connect the material they are learning to current business practices. Your instructor will also draw upon his experiences with various companies to provide additional relevant material.*

2. **Students will be able to make prudent business decisions by employing analytical and critical thinking.**
   Students will demonstrate the ability to solve business problems by applying appropriate decision-making techniques, including defining the problem, collecting appropriate data, identifying alternatives, analyzing information, and interpreting results. *MBA 623 not only requires understanding the theory and solution of statistical and mathematical models, but also the appropriate application of those models and the interpretation of their results. After learning basic techniques, students should be able to apply problem-solving procedures to uncertain situations, develop appropriate models, and choose among competing solutions.*

3. **Students will be effective communicators.**
   Students will demonstrate the ability to effectively convey information using appropriate means of communication. *MBA 623 students are expected to develop their exam solutions and field research project report in a logical and orderly manner. They should become effective at communicating their analyses in verbal discussions, formal presentations and written reports that utilize relevant graphics.*
4. **Students will be competent in applying relevant technology to business problems.**
   - Students will understand the nature, function and limitations of commonly used business information systems.
   - Students will demonstrate proficiency in using technology to solve business problems. *Although many operations models can be solved by hand, numerous models will also benefit being solved with the use of advanced calculators or Excel spreadsheets, as will be discussed in class.*

5. **Students will be competent in ethical decision making.**
   - Students will be able to explain and defend the ethical framework in which they make business decisions.
   - Students will be able to identify parties affected by a business decision, identify how a decision may affect each stakeholder, and arrive at a decision that is (ideally) mutually beneficial or one that minimizes harm to any one party. *MBA 623 students will examine ethical issues related to operations and supply chain management. For example, how should data about customers that is collected by RFID be used? How might a decision like offshore outsourcing potentially be beneficial to one set of stakeholders (e.g., investors and/or customers), but also be detrimental to other stakeholders (e.g., domestic employees)? Is there always a trade-off between doing that which is operationally most efficient and effective versus that which is most ethical?*

6. **Students will be able to function effectively in professional settings.**
   - Students will demonstrate commitment to standards of professional behavior.
   - Students will demonstrate an understanding of individual and group dynamics in organizations, including team building and collaborative behavior in the accomplishment of tasks. *MBA 623 students will have opportunities to work with classmates on in-class exercises and homework. Students will also learn group dynamics in dealing with local companies on their field research project.*

7. **Students will be cognizant of the complexities of operating in a global business environment.**
   - Students will understand the basic economic, political, cultural, and operational motivations for international business. *Students will understand that although quantitative analysis can provide a basis for judgment, final decisions must also incorporate qualitative factors. Models can provide insights and support for different strategies, but managers and analysts provide the most value by evaluating complex trade-offs that are often difficult to incorporate in a single quantitative model. The advent of a global marketplace with resultant increased competition will form a qualitative basis for many decision issues.*
How are course educational objectives measured?
Course educational objectives are measured by students’ performance on exams, individual library research, a group field research project, and participation in in-class exercises.

(a) Exams will test you on material from the text and topics covered in class. Exams will include multiple choice questions, short answer/essay, and problems.
(b) A field research project will be completed as part of a group. Specifics will be handed out in class.
(c) Assignments and Case Study Analyses occur throughout the semester. Some assignments will be required to turn in for credit while some will be discussed in class only. Students are expected to prepare every assignment thoroughly and on time so they may contribute effectively to the classroom discussion. Attendance and participation will directly affect this portion of the grade.

Grading:

Grading is fairly straightforward. Below are the distribution of points to different assignments, and the total point to final letter grade ranges.

<table>
<thead>
<tr>
<th>Source</th>
<th>Points</th>
<th>Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam 1</td>
<td>150</td>
<td>A</td>
<td>&gt; 455</td>
</tr>
<tr>
<td>Exam 2</td>
<td>150</td>
<td>A-</td>
<td>445 – 454</td>
</tr>
<tr>
<td>Assignments</td>
<td>100</td>
<td>B+</td>
<td>430 – 444</td>
</tr>
<tr>
<td>Field Research</td>
<td>100</td>
<td>B</td>
<td>405 – 429</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>500</strong></td>
<td><strong>B-</strong></td>
<td>395 – 404</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C+</td>
<td>380 – 394</td>
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<td></td>
<td></td>
<td>C</td>
<td>355 – 379</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C-</td>
<td>345 – 354</td>
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<td></td>
<td></td>
<td>F</td>
<td>&lt; 345</td>
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These are the guaranteed minimum grades – if you earn a certain amount of points, you are guaranteed of getting at least the grade listed. I reserve the right to apply a curve at the end of the semester if needed, and I would only curve up. However, based on past experience, any curve applied would be slight, so don’t count on a curve to increase your grade from what’s listed here.
Policies:

This is a graduate-level course and I expect higher standards from you than the typical undergraduate class. Please keep this in mind throughout the semester.

No makeup exams will be given except under extraordinary circumstances. Likewise, late work will not be accepted except under extraordinary circumstances. Extraordinary circumstances may include the following: (a) a documented illness, (b) a documented injury, (c) a death or serious injury in your immediate family (with appropriate documentation), or (d) a documented business meeting and/or training session. I will evaluate all excuses on a case-by-case basis, but you should expect to provide documentation in any case. When the absence is planned, any assignment due on that date must be turned in early.

Participation and attendance are required and directly affect your grade via the assignments and case studies portion of your final grade. Changes to the assignments and semester schedule may be inevitable. These changes will be announced in class. You are responsible for obtaining any information presented in classes that you miss.

Assignments to be turned in are expected to be professionally prepared. In evaluating your work, I take the view of a potential future supervisor evaluating the work of a subordinate. Prepare your assignments accordingly. Assignments will be typed unless otherwise specified.

Some exam questions will require you to solve problems. For full credit, you must always show your work for each problem. Make sure your final answers to all problems are clearly presented and explained. For numerical problems, it never hurts to circle, box-in, or otherwise highlight the final answer.

I try to foster an atmosphere of mutual respect, both between the instructor and students as well as among classmates. I will provide you the respect you deserve and expect you to do the same for your fellow classmates and myself. One of the keys to this is maintaining quiet during instruction and while others are asking questions or presenting material. As such, I expect the following:

1. **Cell phones are expected to be turned off in class,** unless you have a pressing need to leave yours on (which you should discuss in advance with me). If you must leave the phone on, it must be on silent ring.
2. Please don’t carry on private conversations during class unless we are working on problems as a class. I understand that often you will have experiences that relate to class topics and that you would like to share. If so, raise your hand and let’s talk about it as a class.
3. Do your best to avoid being late. It disrupts the class, and makes you ineligible for any in-class points that day. **Never walk in on any student presentation.** If you are late when presentations are going on, wait until the current presentation is over before coming in.
Policy on Academic Dishonesty:

You are referred to the Code of Student Conduct published in the University Standards for the policy on academic integrity. I do not tolerate cheating at all. Unless specifically stated otherwise, any work you turn in must be your own work, arrived at in an ethical and moral manner. If I find evidence of cheating, you can expect at the very least to receive a grade of zero for the assignment in question – and quite possibly you will fail the course. This applies to those cheating, and those who assist others in cheating (e.g. by letting someone copy your work). The work in this class is not all that hard, so just do it yourself!

Code of Student Conduct:  http://www.indstate.edu/sjp/docs/code.pdf
Resources for Students:  http://library.indstate.edu/academic-integrity/Acadint-student.pdf
### Tentative Schedule:

<table>
<thead>
<tr>
<th>Lesson/Time Frame:</th>
<th>TOPICS COVERED</th>
</tr>
</thead>
</table>
| **Lesson 1**       | Introduction to the Field, Operations Strategy.  
                     Read: Chapters 1, 2  
                     Read: Productivity Handout  
                     Read: Operations Planning Pyramid Handout |
| **Lesson 2**       | Manufacturing Processes and Layout  
                     Read: Chapters 7, 7A |
| **Lesson 3**       | Service Processes and Waiting Lines  
                     Read: Chapters 8, 8A; Queuing Handout |
| **Lesson 4**       | Project Management  
                     Read: Chapter 3 |
| **Lesson 5**       | Enterprise Resource Planning Systems  
                     Read: Chapter 14 |
|                     | **EXAM 1**       |
| **Lesson 6**       | Using Excel Solver  
                     Read: Chapter 2A |
| **Lesson 7**       | Aggregate Sales & Operations Planning  
                     Read: Chapter 16 |
| **Lesson 8**       | Inventory Management  
                     Read: Chapter 17 |
| **Lesson 9**       | Six-Sigma Quality, Process Control  
                     Read: Chapters 9, 9A; Control Chart Tutorial |
|                     | **EXAM 2**       |