Overview and Objectives

Operations Management (OM) is the design and management of the processes that transform inputs into finished goods or services. World-class performance in operations is essential for a company’s competitive success and long-term survival. This translates into a continuous search for ideas to improve a company’s operations. The objective of this course is to give you a solid foundation in the models and principles that are necessary to generate improvement ideas.

The practice of Operations Management is characterized by a great deal of diversity. Problems and opportunities for improvement appear in various shapes and forms; they all look different. Our unifying framework is to look at different types of OM issues through the lens of flow: flow of work and flow of materials. The focus is on interpreting various situations in terms of flow elements, introducing ways of modeling different elements of flow, and discussing the applications of these models to generate and evaluate improvement ideas.

The course objectives are: (1) to prepare you to see the world in terms of flows of work and material, (2) to provide you with models and concepts to analyze these flows, (3) offer you practice in the application of these models to generate improvement ideas and, finally, (4) to motivate you to spot opportunities for such improvements in your workspace.

The class structure is divided into three sections. After introducing the course in session 1, we will divide the rest of the sessions as following:
Section 1: Improvements through resource management: Capacity & Time. Sessions 2-6.
Section 2: Improvements through process changes: Lean & Six Sigma. Sessions 7-10.
Session 15 is for wrap-up and for you to share your own improvement stories.

Course Materials

There is only one item required for purchasing: A Case Pack containing Harvard cases that can be purchased through a link available on class website (on Canvas).

All other required materials (readings required for class participation, and practice questions & assignments) will be available on class website. Presentation slides will be distributed at the beginning of each class session and will be posted on class website.

The following text book for Operations Management is “strongly recommended” (but not required). The presentation of material in class is not synchronized with this book but readings from the books can be used as additional support for material covered in class.
Grading

<table>
<thead>
<tr>
<th></th>
<th>% of total grade</th>
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<tbody>
<tr>
<td>Two section quizzes + One Midterm Quiz (individual)</td>
<td>30%</td>
</tr>
<tr>
<td>Three Assignments (group)</td>
<td>30%</td>
</tr>
<tr>
<td>Participation/Surveys (individual)</td>
<td>15%</td>
</tr>
<tr>
<td>Final Exam (individual)</td>
<td>25%</td>
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For due dates, see class schedule below.

Section quizzes are designed to make sure that you have regular occasions to review the class material and test your understanding on relatively simple questions. Section quizzes will also prepare you for the assignment and for class discussions. Midterm Quiz is meant to provide a midpoint check of your understanding of the material and to prepare you for the final exam. All quizzes will be administered through class website.

Assignments are due at the end of each of the three sections. After basic material is delivered in class and reinforced through quizzes, assignments bring together all the models and ideas in that section and apply them to bigger problems and to real cases. By asking specific questions about cases, assignments will prepare you for class discussions of cases. Assignments will also have questions that will ask your group to make brief presentations in class on due dates. Assignments will be posted on the class website. It is strongly recommended that each group member work on assignment individually before combining the responses into one group submission delivered at the beginning of the class in which it is due.

Participation grade depends on the quality of your participation and contributions to class discussions. This will require you to complete assigned readings before class and complete any pre-session or in-class surveys. Learning how to apply theory in the real world comes from sharing of opinions and experiences. Taking initiative to think about your own examples of class concepts and sharing them with others in class or on class website discussion boards will increase your participation grade. Missing classes without sending me an email notice, being late to classes, and any use of phones/laptops in class that is not directly related to that session’s material will decrease your participation grade.

Final exam is open-book, take-home, released soon after the last session and due in a week.

Availability of Help

My phone number, email and office hours are listed at the top. I am usually in office and you are welcome to drop in at any time even outside of office hours if you give me a short notice. I am usually quick in responding to emails and that is the best way to contact me any time. Sometimes, I find it difficult to have an extended back-and-forth on email and I might reply with my cell number and request you to call me. When a group is working on a presentation, I do like to get involved and find that a conference call works best. Scheduling phone calls on weekends is fine.
**Academic Honesty and Expectations**
I employ the policies and procedures espoused by the Foster School of Business Honor Code to maintain academic integrity in the course. The Honor Code of the Foster School of Business expressly prohibits cheating, attempted cheating, plagiarism, and lying to administration or faculty as it pertains to academic work. Suspected violations of the Honor Code will be referred to the Foster Honor Council as outlined within the Honor Code.

As applied to this class, here are a few specific expectations. For individual work, you must not accept any help and the final submission must be your own work. Please do not ask for or accept solutions from anybody else. For group assignments, it is expected that each member of the group has made an individual effort to solve all problems and, in the end, each member is completely aware of the content in the submitted assignment. For case analysis, you must not search for material or look for answers on the Web; please analyze the case relying only on the information in the case and without any outside help. When you are in class, it is expected that you are not spending time and energy in activities (surfing, email, social networks) unrelated to the class material.

**Preparation and Learning Experience**
The table on next page lays out the topics we will cover in each session and due dates. Read/Prepare column shows what you should read before class. Here are a few things that will improve your learning experience.
- Complete the assigned reading (and think about it) before the class.
- Be in class on time; when in class, *engage* (focus, participate, share, advance the conversation).
- If there is any problem in understanding class material, ask for help as soon as possible.
- Take quizzes on time to reinforce what we did in class.
- Try practice problems; start assignments early.
- Work through cases and applications with an eye on takeaways.
- Think about related examples and share them with others (in class or online).
## Class Schedule

(Class details for each class along with links to readings will be available on class website).

<table>
<thead>
<tr>
<th>SESSION DATE</th>
<th>TOPICS / CONCEPTS</th>
<th>READ/PREPARE BEFORE CLASS</th>
<th>DUE AT CLASS BEGINNING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Wed 27-Sep</td>
<td>Introduction</td>
<td>Read Syllabus</td>
<td></td>
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<tr>
<td>2. Mon 2-Oct</td>
<td>Process Capacity</td>
<td>Shouldice Hospital</td>
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<tr>
<td>3. Wed 4-Oct</td>
<td>Balance</td>
<td>Kristen’s cookies</td>
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<tr>
<td>4. Mon 9-Oct</td>
<td>Variability &amp; Wait Times</td>
<td>Psychology of queues</td>
<td>Section 1 Quiz</td>
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<tr>
<td>5. Wed 11-Oct</td>
<td>Capacity Pooling</td>
<td>Pronto Pizza Grocery</td>
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<tr>
<td>6. Mon 16-Oct</td>
<td>Priority &amp; Applications</td>
<td>Manzana Insurance</td>
<td>Assignment 1</td>
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### Section 1: Capacity & Time

- **Section 2: Lean & Six Sigma**
  - 9. Wed 25-Oct | Quality & Six Sigma | Six Sigma Website | Mid-Term Quiz* |
  - 10. Mon 30-Oct | Office/Service Lean | Lean Office | Assignment 2 |

### Section 3: Supply Chain

- 11. Wed 1-Nov | Service Level Optimization | Sport Obermeyer |
- 12. Mon 6-Nov | Total Logistics Cost | HP |
- 14. Mon 13-Nov | Information Sharing & Collaboration | Barilla | Section 3 Quiz |
- 15. Wed 15-Nov | Wrap-up & Improvement Stories | Assignment 3 |

*Mid-Term Quiz will be posted after Wed 18-Oct class and will be available for one week. Final Exam will be posted 15-Nov Wed 11pm and will be due before 22-Nov Wed 11pm.