MBA 638-001
Operations Management
Fall 2014
Syllabus

Course Instructor: Professor Ioannis (Yannis) Bellos
Office Number: Enterprise Hall 150
Office Telephone: 703-993-1788
Office Hours: Before class and by appointment
Email: ibellos@gmu.edu

Course Meeting Times: Thursday 6:30-10:05 pm
August 18-October 25
Alan and Sally Merten Hall - Room 1200

Required Course Materials: Operations and Supply Chain Management 14th Edition
by F. Robert Jacobs, Richard B. Chase

Electronic version with only the assigned chapters available
at: https://create.mheducation.com/shop/
ISBN: 9781308279534

Course reader with cases available at Study.net
http://www.study.net/r_mat.asp?crs_id=30050708

Simulation access code (required) available at
Responsive Learning Technologies
http://mgr.responsive.net/Manager/ShowClient
The institution name is “George Mason University”
The product is titled “Littlefield Code for MBA 638”

Course Web Page: On Blackboard (BB)

Course Description: This course introduces managerial principles and analytic methods in Operations Management (OM). OM consists of business functions that guide and control value-adding transformation processes in which resources are transformed into goods or services. OM helps both for-profit and non-profit business organizations improve their transformation processes in order to gain a competitive advantage. This course discusses a wide range of OM concepts, such as operations strategy, new product and service development, process selection, waiting line management, quality management, supply chain management, capacity planning, and inventory control. These concepts assist operations managers in designing, planning, and implementing effective and efficient transformation processes. Students in this course develop practical OM skills through class discussions, homework exercises, case studies, and game activities.

Prerequisites: Admission to MBA program. It is also assumed that each student is familiar with EXCEL.
Program Learning Goals:

1. Teaming & Leading: Our graduates will demonstrate the team leadership and interpersonal skills needed to form, lead, and work effectively in diverse organizational teams.

2. Analytical Decision Making: Our students will demonstrate the ability to analyze uncertain complex management situations using appropriate tools, techniques, and information systems for decision-making.

3. Knowledge of Functional Business Disciplines: Our graduates will demonstrate the ability to integrate knowledge from all functional areas of business into a meaningful, firm-level perspective.

4. Global Understanding: Our graduates will demonstrate a perspective on how businesses operate in the global environment.

5. Communication Skills: Our graduates will demonstrate written, oral, and presentation skills necessary to explain problems and solutions effectively and persuasively.

6. Ethics and Social Responsibility: Our graduates will have a sense of professional and social responsibility in the conduct of managerial affairs.

Special Course Objectives:

- Develop an understanding of the tradeoffs among different types of production/operations systems in terms of key characteristics, management tasks, organization and control, and impact on the strategy and direction of the firm.

- Develop a basic competence with the tools and techniques used by operations professionals in managing operations and setting operations policy.

- Understand the strategic production/operations management issues and their relationship to the other functional areas of the firm.

- Select the most appropriate operations to gain a competitive advantage.

- Propose business solutions in written and verbal form for problems confronting operations managers.

School of Business Standards of Behavior:

The mission of the School of Business at George Mason University is to create and deliver high quality educational programs and research. Students, faculty, staff, and alumni who participate in these educational programs contribute to the well-being of society. High quality educational programs require an environment of trust and mutual respect, free expression and inquiry, and a commitment to truth, excellence, and lifelong learning. Students, program participants, faculty, staff, and alumni accept these principles when they join the School of Business community. In doing so, they agree to abide by the following standards of behavior:

- **Respect** for the rights, differences, and dignity of others.

- **Honesty** and integrity in dealing with all members of the community.

- **Accountability** for personal behavior.

Integrity is an essential ingredient of a successful learning community. Ethical standards of behavior help promote a safe and productive community environment and ensure for every member the opportunity to pursue excellence. School of Business can and should be a living model of these behavioral standards. To this end, community members have a personal responsibility to integrate these standards into every aspect of their experience at the School of Business. Through our personal commitment to these Community Standards of Behavior, we can create an environment in which all can achieve their full potential.
Academic Integrity:
George Mason University shares in the tradition of an honor system that has existed in Virginia since 1842. The Honor Code is an integral part of university life. On the application for admission, students sign a statement agreeing to conform to and uphold the Honor Code. Students are responsible, therefore, for understanding the provisions of the code. In the spirit of the code, a student’s word is a declaration of good faith acceptable as truth in all academic matters. Cheating and attempted cheating, plagiarism, lying, and stealing of academic work and related materials constitute Honor Code violations. To maintain an academic community according to these standards, students and faculty must report all alleged violations of the Honor Code to the Honor Committee. Any student who has knowledge of, but does not report, an Honor Code violation may be accused of lying under the Honor Code. All students are expected to adhere to this code. All acts of academic dishonesty will be dealt with in accordance with the provisions of this code. For more information on the University’s Honor Code, please visit http://oai.gmu.edu/the-mason-honor-code/.

For practical purposes, the meaning of the code for this class is:

- Cheating on exams is not allowed.
- Case and simulations comprise original ideas from the team members. No use of the Internet or previous semester(s) papers/presentations is allowed.

Attendance:
It is expected that each student be prepared for class including having prepared assigned material. In addition, it is expected that each student be in attendance at each class session. Missing classes and tardiness will negatively affect your class participation grade. Let the instructor and your case study teammates know in advance should you have to miss a class.

Disability:
All academic accommodations due to disability should be arranged through the Office of Disability Services (ODS). If you are a student with a disability and you require academic accommodations, please contact the ODS at 703-993-2474. Please also inform me by the second week of class.

Inclement Weather & Campus Emergencies:
Information regarding weather-related changes in the University’s schedule (e.g., closing or late opening) will be provided on the GMU website and via Mason Alert. Students sign up for the Mason Alert system to provide emergency information of various sorts at https://alert.gmu.edu. If campus is closed, please check Blackboard for announcements from the professor. An online class via Blackboard Collaborate will likely be held.

Communications:
All communications from me to you will be directed via e-mail or BB announcements. I will address all of my e-mails and replies ONLY to your @gmu.edu e-mail address for concerns of privacy and confidentiality. If you use another e-mail account as your primary e-mail, please be sure to forward your GMU e-mail to that account.

Class Procedure:
The class can be described as a mix of lectures, discussions, cases, and games. Students are encouraged to discuss their own work experience when relevant to the class material, even during lectures. Please bring and use your name tents for each class. You are encouraged to read the textbook chapters before class and may need to in order to prepare cases. You should read (or reread) the chapters after the class, as it will improve your understanding of the material. In addition, there will be several case studies during the semester for which you should come fully prepared. See the section on case studies. This course tends to be quantitative in that we use math; however, the course requires verbal and written skills as well. Specifically, you should be able to translate the written problem into the appropriate analytic tool to be used. Additionally, case write-ups will require both quantitative and verbal skills.
**Homework Assignments:**
Practice problems will be assigned periodically to enhance understanding of course materials. A solution will become available on the course website in the following week. Problems will not be collected and graded. Note that exam questions are similar to practice problems. In order to do well on exams, every student needs to devote certain individual efforts to each homework assignment. Students are encouraged to discuss their answers in small groups and/or to stop by office hours to assure full understanding of course materials.

**Examinations:**
During the semester, there will be one midterm (in class) and one final examination (take-home). The midterm will cover the material covered up to and including Class 5. The final examination is comprehensive for the entire course and is given only at the specified time as published by the University Registrar and shown on the schedule below. IF YOU CANNOT TAKE THE FINAL AT THE TIME SHOWN, DO NOT REGISTER FOR THIS CLASS. NO MAKEUPS WILL BE GIVEN without a documented excuse considered valid per university policy. The midterm is closed book and closed notes. You will be allowed one 8.5 x 11 sheet of paper, single sided, as a cheat sheet (written or typed). The final examination is a closed book and closed note exam. You will be allowed one 8.5 x 11 sheet of paper as a cheat sheet (written or typed). You may use both sides if you wish (allowing you to add on to the one created for the midterm). Information presented with the cases and by any guest speakers may be included on the examinations.

**Questions:**
All students are encouraged to bring questions, concerns and comments to my attention as soon as they arise. Please do not wait! Once final grades are submitted, changes to grades will only be made to correct errors in tallying scores. In addition, there is a feedback section on BB under Discussion Board that allows anonymous comments to encourage your feedback.

**Case Studies:**

- **Overview:** Case studies provide excellent hands-on opportunities for students to apply OM skills learned in this course. Students are required to work together as a team as well as to work individually in analyzing cases. Each case session consists of class discussion based on the case and the suggested preparation questions. In preparing a case, students may neither use notes from any sources (such as the Internet and previous classes) nor obtain help from anyone other than their teammates.

- **Case Materials:** Cases can be obtained from [http://www.study.net/](http://www.study.net/). Register, then find our course.

- **Teams:** Students are required to analyze cases in groups. Please group yourselves into teams of 5 or 6 by the first week of class. Please email me your team list so I can create groups on BB and possibly assign others to your group if necessary. Every team member should contribute equally to its group reports. Successful teamwork needs intensive communication and close coordination among team members. Respect your teammates at all times and be prepared for every group meeting. An opportunity for peer review of team members will be available at the end of the semester.

- **Requirements and Assignments:** Individual cases (IDEO and Wal-Mart China) are to be prepared individually by answering the questions posed on BB (the specific ones for the individual assignment, generally a subset of the full list of questions) and submitted to the Assignment in BB. Group cases require a group report (see next), also submitted to BB. Please see below for detailed guidelines of each assignment.

- **Group Report:** For three cases, a group report (one per group) is due through BB at the beginning of the case study session. Each group will do Kristen’s Cookies, Progressive, and Scientific Glass. A report should include (but is not limited to) sections such as introduction, problem statement, case analysis, recommendations, and implementation issues. Questions for case preparation will be provided on BB at least two weeks before each case class session. A good report would avoid extensive reiteration of case content and thoroughly address each given question. A group report may not be
longer than 10 pages, 1\(\frac{1}{2}\) spaced, 12-point font (including exhibits). The format should be a report, not question/answer format.

- **Individual Case**: For two cases (IDEO and Wal-Mart China), each student individually is required to prepare and submit a response at the beginning of a case class session. An individual response should address the questions posted on BB, identified specifically from the list for the individual write up. This is a brief report and can be no longer than 2 pages (1\(\frac{1}{2}\) spaced, 12-point font). With very limited space, your arguments should get to the point of each given question right away (no need for an introduction). You must seriously attempt any quantitative analysis required to obtain full credit (40 points each, 2 total). These should be submitted electronically to BB, and you should also bring a hard copy to class.

FOR EACH CASE, PLEASE SUBMIT ELECTRONICALLY AND BRING A HARD COPY TO CLASS. ONE PER GROUP FOR GROUP ASSIGNMENTS.

**Class Participation**:
Class Participation is taken seriously. I expect all class members to come to class, be prepared, and discuss the cases or material assigned. Guidelines for Evaluating Participation are shown below.

- **Outstanding Contributor**: Ideas offered are always substantive and provide one or more major insights as well as direction for the class. Challenges are well substantiated and persuasively presented. If this person were not a member of the class, the quality of discussion would be diminished markedly.

- **Good Contributor**: Ideas offered are usually substantive and provide good insights and sometimes direction for the class. Challenges are often well substantiated and persuasive. If this person were not a member of the class, the quality of discussion would be diminished.

- **Adequate Contributor**: Ideas offered are sometimes substantive and provide generally useful insights but seldom offer a new direction for the discussion. Challenges are sometimes presented, fairly well substantiated, and sometimes persuasive. If this person were not a member of the class, the quality of discussion would be diminished somewhat.

- **Non-Participant**: This person says little or nothing in discussions. Hence, there is not an adequate basis for evaluation. If this person were not a member of the class, the quality of discussion would not be changed.

- **Unsatisfactory Contributor**: Contributions reflect inadequate preparation. Ideas offered are seldom substantive and provide few if any insights and never a constructive direction for the discussion. Integrative comments and effective challenges are absent. If this person were not a member of the class, valuable air-time would be saved.

**Online Class Participation**:
There will be an online portion of class participation as well. You are required to post at least 2 articles over the module and comment (seriously and in a useful manner) on at least 2 more. Posting should include the link/source information to the article and 1 to 2 paragraphs, which will summarize the article and justify why the article is interesting, useful, and relevant to OM. The idea is to get a lot of exposure to Operations Management without having to read every news source personally! Very late postings will receive less credit than ones that allow time for discussion. This must be done by Sunday, Oct-19 at midnight.

**Littlefield Labs Simulation**:
Littlefield is an online simulation. Teams will comprise a maximum of 2 members. Your team will need at least one laptop during that class and more will be helpful for analysis. You will be given access to the simulation 1 week before the class. You will be able to see the first 30 days of data in order to plan your strategy for the actual simulation. Details are given in the simulation handout. The preplan is due the night of the simulation, one per group. It should include your strategy for the game and the analysis your
group did to arrive at that simulation. Your grade will be based 50% on the preplan, 25% on your profit ranking in the simulation, and 25% on your individual participation during the simulation and the debrief discussion. Everyone must purchase the Study.net course pack in order to participate in the simulation and receive a grade. Not purchasing the simulation or not participating in the simulation will result in a grade of 0.

**Grading:**

The course grade will be out of 1000 points. The breakdown is as follows. Your total point score out of 1000 determines your final letter grade. There will be no extra credit.

<table>
<thead>
<tr>
<th></th>
<th>Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resume/Picture</td>
<td>5</td>
<td>0.50%</td>
</tr>
<tr>
<td>Group Case Reports (3 × 80 pts)</td>
<td>240</td>
<td>24%</td>
</tr>
<tr>
<td>Class Participation</td>
<td>100</td>
<td>10%</td>
</tr>
<tr>
<td>Online Participation</td>
<td>70</td>
<td>7%</td>
</tr>
<tr>
<td>Littlefield</td>
<td>80</td>
<td>8%</td>
</tr>
<tr>
<td>Individual Case Analyses (2 × 40 pts)</td>
<td>80</td>
<td>8%</td>
</tr>
<tr>
<td>Midterm</td>
<td>175</td>
<td>17.50%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>250</td>
<td>25%</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td>1000</td>
<td>100%</td>
</tr>
</tbody>
</table>

**GRADING SCALE:** A = 90-100; B = 80-89.99; C = 65-79.99; F = below 65 (+/- system used)
## Schedule (Subject to Change):

<table>
<thead>
<tr>
<th>Class</th>
<th>Day</th>
<th>Date</th>
<th>Topic</th>
<th>Due</th>
<th>Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Th</td>
<td>21-Aug</td>
<td>Introduction&lt;br&gt;What is Operations?&lt;br&gt;Operations Strategy&lt;br&gt;Goods vs Services</td>
<td>Resume and picture via BB, Team Lists</td>
<td>• Chapter 1 and Chapter 2&lt;br&gt;• “Deep Change”<em>&lt;br&gt;• “Sustainability through Servicizing”</em>&lt;br&gt;• “Knowledge Worker Productivity”<em>&lt;br&gt;• Zara Article (BB)&lt;br&gt;○ Optional: “Operations Based Strategy”</em>&lt;br&gt;○ Optional: “Creating Growth with Services”<em>&lt;br&gt;○ Optional: “How to Build Risk into your Business Model”</em></td>
</tr>
<tr>
<td>2</td>
<td>Th</td>
<td>28-Aug</td>
<td>Service Processes&lt;br&gt;New Product Development&lt;br&gt;New Service Development&lt;br&gt;IDEO case</td>
<td>IDEO Case (Individual)</td>
<td>• IDEO Case (A)&lt;br&gt;• Chapter 3 and Chapter 9&lt;br&gt;• “The Four Things a Service Business Must Get Right”<em>&lt;br&gt;○ Optional: “R&amp;D comes to services”</em>&lt;br&gt;○ Optional: “Enlightened Experimentation”<em>&lt;br&gt;○ Optional: “Design Thinking”</em></td>
</tr>
<tr>
<td>3</td>
<td>Th</td>
<td>4-Sep</td>
<td>Strategic Capacity Planning&lt;br&gt;Process Analysis/ Bottlenecks&lt;br&gt;Little's Law&lt;br&gt;Product-Process Spectrum</td>
<td></td>
<td>• Chapter 5 p. 109-116,119-122&lt;br&gt;• Chapter 7 (not break even)&lt;br&gt;• Chapter 11 (focus on this)&lt;br&gt;• Hospitals Get Serious (BB)</td>
</tr>
<tr>
<td>4</td>
<td>Th</td>
<td>11-Sep</td>
<td>Kristen’s Cookies&lt;br&gt;Queuing&lt;br&gt;</td>
<td>Kristen’s Cookies (Group)</td>
<td>• Kristen’s Cookies Case&lt;br&gt;• Chapter 10 p. 221-240&lt;br&gt;• Call Centre Waiting lines could make you sick (BB)&lt;br&gt;• “Designing Waits that Work”*</td>
</tr>
<tr>
<td>5</td>
<td>Th</td>
<td>18-Sep</td>
<td>Progressive Case&lt;br&gt;Pothing&lt;br&gt;Questions/Review</td>
<td>Progressive (Group)</td>
<td>• Progressive Case&lt;br&gt;• The Pooling Principle (BB)</td>
</tr>
<tr>
<td>6</td>
<td>Th</td>
<td>25-Sep</td>
<td>Midterm&lt;br&gt;Lean Operations&lt;br&gt;</td>
<td></td>
<td>• Chapter 14 (read after class)</td>
</tr>
<tr>
<td>7</td>
<td>Th</td>
<td>2-Oct</td>
<td>Inventory</td>
<td></td>
<td>• Chapter 20 p. 513-519, 522-531, 535-540&lt;br&gt;• “Inventory Driven Costs”*&lt;br&gt;• The Pooling Principle (BB)</td>
</tr>
<tr>
<td>8</td>
<td>Th</td>
<td>9-Oct</td>
<td>Scientific Glass Case&lt;br&gt;Supply Chain Management&lt;br&gt;</td>
<td>Scientific Glass (Group)</td>
<td>• Chapter 16&lt;br&gt;• “Best Value Supply Chains”<em>&lt;br&gt;• “How Gillette Cleaned Up its Supply Chain”</em>&lt;br&gt;○ Optional: “The Bullwhip Effect”<em>&lt;br&gt;○ Optional: “Triple A supply chain”</em></td>
</tr>
<tr>
<td>10</td>
<td>Th</td>
<td>23-Oct</td>
<td>Littlefield Simulation&lt;br&gt;Review&lt;br&gt;</td>
<td>Littlefield Preplan (one per mini-group)</td>
<td>• Forecasting Slides (BB)</td>
</tr>
<tr>
<td>11</td>
<td>TBD</td>
<td></td>
<td>Final Exam - Cumulative</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Obtain from library database ([http://library.gmu.edu/](http://library.gmu.edu)/):


**Study.net:**

• Case Pack
  – IDEO Service Design A (INSEAD 10/2008-5276)
  – Kristen’s Cookies A (Harvard Case 9-686-093)
  – Progressive Insurance Concierge Program (Darden Case UVA-OM-1327)
  – Scientific Glass (Harvard 4208)
  – Wal-Mart China (Ivey 908D09)

• Simulation Pack
  – Littlefield Labs: Managing a Short Product Lifecycle at Littlefield Labs

**On BB:**

• Zara Article: Business Model Innovation is the Gift that Keeps on Giving, by Girotra and Netessine, *HBR Blog Network*, December 5, 2012

• Call Centre Waiting Lines Could Make You Sick
• The Pooling Principle

**In Textbook:**

• Chapters