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: Wednesdays 6:30-10:05pm
August 17-October 24
Mason Hall - D023

Required Course Materials: Course Reader available at Harvard:
https://cb.hbsp.harvard.edu/cbmp/access/37739443

Simulation Access code (Required) available from Responsive Learning Technologies at
http://mgr.responsive.net/Manager/ShowClient.
The institution name is “George Mason University.”
The product is titled “Littlefield Code for MBA 638.”
The price is $18. You will need your registration code
for the game in Week 10.

Course Website: 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 competitive advantages. This course discusses a wide range of OM concepts, such as operations strategy, process selection, quality management, supply chain management, capacity planning, and inven-
tory 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

Goals addressed in this course are in bold:

1. Teaming and Leading: Demonstrate the team leadership and interpersonal skills needed to form, lead, and work effectively on diverse organizational teams.

2. Knowledge of Functional Business Disciplines: Demonstrate knowledge of all core functional areas of business and an ability to integrate them into a meaningful firm level perspective.

3. Analytical Decision Making: Demonstrate the ability to analyze uncertain complex management situations using appropriate tools, techniques and information systems for decision-making.

4. Communication: Demonstrate written, oral and presentations skills necessary to explain problems and solutions effectively and persuasively.

5. Ethics and Responsibility: Demonstrate knowledge of ethical decision making considerations, corporate social responsibility and sustainability practices.

6. Global Awareness: Identify relevant economic, political, and social factors that impact business conducted both within and across national boundaries.

Specific 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 competitive advantages.

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

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 should read the assigned material
before class and will need to in order to prepare. You should also reread after the class as needed, 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. 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**

There will be one graded problem set, due Week 3. Otherwise, practice problems will be assigned periodically to enhance understanding of course materials. A solution will become available on course website in the following week. These practice 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 on 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 (TBD). 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 as scheduled. NO MAKEUPS WILL BE GIVEN without a valid, per university policy, documented excuse. The midterm is closed book and closed notes. You will be allowed one 8.5 × 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 × 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 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 your teammates.

- **Case Materials:** Cases can be obtained from Harvard. Register, then find our course.

- **Teams:** Students are required to analyze cases in groups. Please group yourselves into teams of size 4 or 5 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) are to be prepared individually by answering the questions posed on BB 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 Czech Mate, Zappos, 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 would thoroughly address each given question. A group report may not be longer than 8 pages, $1 \frac{1}{2}$ spaced, 12-point font (including exhibits). Format should be a report, not question/answer format.

- **Individual Case**: For one case (IDEO), 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. This is a brief report and can be no longer than 5 pages. This should be submitted electronically to BB.

Note that no late work will be accepted without valid, per university policy, documented excuse.

FOR EACH OF THESE, PLEASE SUBMIT ELECTRONICALLY. 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 to discuss the cases or material assigned. In addition, for any activities or games, full involvement is expected. Guidelines for Evaluating Participation are shown below.

- **Outstanding Contributor**: Ideas offered are always substantive, 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, 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, provide generally useful insights but seldom offer a new direction for the discussion. Challenges are sometimes presented, fairly well substantiated, and are 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, 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-Current Events Discussions

Current issues in operations are reviewed in business publications such as *Business Week*, *Fortune*, *The Wall Street Journal*, and the business section of local newspapers. A regular perusal of these sources by students, as well as other industry specific publications and web sites, will ensure richer discussions. These activities are essential to further benefit from the course and will make a positive contribution to your learning process.

To help us all identify these related current events, using the Current Events Discussion Forum, each group is assigned a week to be the discussion leader. For the week your group leads, please post at least 2 articles related to operations management. Each article posting should include a 1-2 paragraph summary of the article, another paragraph on why it’s interesting and/or useful, how it is related to operations management, and the link/source information to the article. Your group should continue to moderate the discussion by replying to others comments. Grading is based on the usefulness of the article (interesting, related to operations, etc.) and the extent of moderation. Please post articles early in the week so others can read and comment on them. Unrelated articles, one line comments and articles/comments posted the last day without time for comments will reduce your participation grade. Weeks begin and end the night of each class at 6:01pm.

The weeks your group is not the leader you should comment (seriously and in a useful, substantive manner) individually on the articles. Over the course you should comment on at least 4 articles beyond your assigned week. The idea is to get additional exposure to operations management in practice without having to read every news source personally.

### Littlefield Labs Simulation

Littlefield is an online simulation. Teams will be a max of 2 members, different than the case groups. 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 Simulation 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.

### A Note on Team Grades and Free Ridership

All team members will get the same grade on each of the team assignments unless at least two people in the team decide to change to a peer performance appraisal system. Under such a system, members will rate one another’s contribution for each of the team assignments that your team chooses to invoke the peer appraisals on, and individual grades will be
adjusted (both upward and downward) based on these ratings. If you decide to go with the peer performance appraisal system, prepare a document to that effect signed by at least two members of your team to be submitted with each team assignment(s) for which you wish to do this, and I will contact you for your evaluation of your fellow team members’ contributions. You cannot decide to do peer performance appraisal after you receive your grade. You must tell me and hand in the document with signatures of the majority of the team when the assignment is due.

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>Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resume/Picture</td>
<td>5</td>
</tr>
<tr>
<td>Group Case Reports (3 × 75 pts)</td>
<td>225</td>
</tr>
<tr>
<td>Class Participation</td>
<td>100</td>
</tr>
<tr>
<td>Online Participation (Group)</td>
<td>30</td>
</tr>
<tr>
<td>Online Participation (Individual)</td>
<td>40</td>
</tr>
<tr>
<td>Problem Set (Individual)</td>
<td>30</td>
</tr>
<tr>
<td>Littlefield</td>
<td>75</td>
</tr>
<tr>
<td>Individual Case Analysis (IDEO)</td>
<td>75</td>
</tr>
<tr>
<td>Midterm</td>
<td>170</td>
</tr>
<tr>
<td>Final Exam</td>
<td>250</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>1000</strong></td>
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</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>
</table>
•Process Analysis (Core Reading)  
•Kristen’s Cookies Case  
◦Optional: “Operations Based Strategy”* |
| 2     | W   | 26-Aug | More Process Analysis Czech Mate Case Goods vs. Services Service Processes | Czech Mate (Group) | ●Czech Mate Case  
●“Sustainability through Servicizing”*  
●“The Four Things a Service Business Must Get Right”*  
●“Breaking the Trade-off Between Efficiency and Service”*  
◦Optional: “Creating Growth with Services”* |
| 3     | W   | 2-Sep  | Queuing In-class Exercise | Problem Set (Individual) | ●Managing Queues (Core Reading)  
●Hospitals Get Serious (BB) |
| 4     | W   | 9-Sep  | Zappos Case Pooling | Zappos (Group) | ●Zappos Case  
●The Pooling Principle: Sections 1, 3, 4 (BB) |
| 5     | W   | 16-Sep | Quality Questions/Review |  | ●Managing Quality with Process Control (Core Reading; pp.: TBD)  
●“Where Process-Improvement Projects Go Wrong”*  
◦Optional: “Process Management and the Future of Six Sigma”* |
| 6     | W   | 23-Sep | Midterm |  | ●Managing Inventory (Core Reading)  
●Newsvendor Note (BB)  
●The Pooling Principle (BB)  
◦Optional: “Inventory Driven Costs”* |
| 7     | W   | 30-Sep | Inventory |  |  |
| 8     | W   | 7-Oct  | Scientific Glass Case Supply Chain Management | Scientific Glass (Group) | ●“Best Value Supply Chains”*  
●“The Bullwhip Effect”*  
◦Optional: “How Gillette Cleaned Up its Supply Chain”*  
◦Optional: “Triple A supply chain”* |
| 9     | W   | 14-Oct | IDEO Case New Product Development New Service Development In-class Game Introduce Littlefield | IDEO (Individual) | ●IDEO Case (A)  
●“Designing Waits that Work”*  
●L. Labs note  
◦Optional: “R&D comes to services”*  
◦Optional: “Enlightened Experimentation”*  
◦Optional: “Design Thinking”* |
| 10    | W   | 21-Oct | Littlefield Simulation Review | Littlefield Preplan (one per mini-group) | ●Forecasting Slides (BB) |
| 11    | TBD |  |  |  |  |

- *Obtain from Library Database: [http://library.gmu.edu/](http://library.gmu.edu/)


- **Harvard Case Pack**
  – Process Analysis Core Reading (Harvard 8007-HTM-ENG)
  – Kristen’s Cookies A (Harvard Case 9-686-093)
  – Czech Mate: Jake and Dan’s Marvelous Adventure (Darden UV3571-PDF-ENG)
  – Managing Queues Core Reading (Harvard 8047-HTM-ENG)
  – Zappos Customer Loyalty Team (Darden UV6022-PDF-ENG)
  – Managing Quality with Process Control Core Reading (Harvard 8020-HTM-ENG)
  – Managing Inventory Core Reading (Harvard 8016-HTM-ENG)
  – Scientific Glass Inc.: Inventory Management (Harvard 4208-PDF-ENG) (Note you do not need the audio unless you want it)
  – IDEO Service Design A (INSEAD 10/2008-5276)
• **Simulation Pack**
  - Littlefield Labs: Managing a Short Product Lifecycle at Littlefield Labs

• **On BB**
  - The Pooling Principle
  - Newsvendor Note
Other Important Information-Please Read!

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 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-2/](http://oai.gmu.edu/the-mason-honor-code-2/).

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 Internet or previous semester(s) papers/presentations.
- In your work on all written assignments, you may not present as your own the words, the work, or the opinions of someone else without proper acknowledgement.
- You also may not borrow the sequence of ideas, the arrangement of material, or the pattern of thought of someone else without proper acknowledgement.
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 or http://ods.gmu.edu/. 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 MasonAlert. 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.

Business Library Liaison Information
Jo Ann J. Henson, MLIS Business and Economics Liaison Librarian Fenwick Library Fairfax Campus: http://infoguides.gmu.edu/business

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.edu e-mail to that account.

Religion
Students who will miss class for religious reasons should inform me of their anticipated absences as soon as possible.

Counseling Center
George Mason University has a counseling center that can provide assistance if you find yourself overwhelmed by life, want training in academic or life skills, or the like. More information is available at http://www.gmu.edu/departments/csdc/.

Writing Guidelines
Unless otherwise specified, all writing assignments should be formatted as follows: 1.5-spaced, Times New Roman, 12-point font, and 1-inch margins. To cite and reference professional or academic sources, please use APA style. Specific instructions for in-text citations and referencing
are found in the Publication Manual of the American Psychological Association 6th Edition or at http://owl.english.purdue.edu/owl/resource/560/01/.

George Mason University has a writing center that can help you improve your English writing skills. More information is available at http://writingcenter.gmu.edu/.