OM 301-006 - Operations Management

Spring 2013

Instructor: Professor Ioannis (Yannis) Bellos, PhD.

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Phone: 703-993-1788

Email: ibellos@gmu.edu

Class Time: Friday, 01:30-04:10 pm, Art and Design Building 2003

Office Hours: Friday, 04:30-05:30 pm (or by appointment).


Note: The text is an excellent source of information that I encourage you to read, but it is not a substitute or replacement for classroom instruction.

Website: https://mymasonportal.gmu.edu/webapps/portal/frameset.jsp

Prerequisites: A student must have received a C or higher in OM 210 (formerly DESC 210) and have sophomore standing. It is assumed that each student is proficient in elementary algebra, calculus, probability, and geometry. Familiarity with MS Word, Excel, and PowerPoint is also expected. Deficiencies should be self-remediated early in the semester.

Course Description:

Operations management (OM) is defined as the design, operation, and improvement of the systems that create and deliver the firm’s primary products and services. Understanding the role of the operations function and its impact on the competitiveness of the firm is an important part of any manager's training. Operational issues include designing, acquiring, operating, and maintaining facilities and processes; purchasing raw materials or component parts; developing new products and services; controlling and maintaining inventories; and providing the labor needed to produce a product or service so that customer expectations are met.

This course in Operations Management is intended to be a survey of operating practices and models in both manufacturing- and service-oriented firms. It is intended to provide managers in all functional areas with sufficient knowledge to make informed “total business decisions” and to introduce standard terms and concepts for communications with operations personnel. In such a course, it should be recognized that breadth of subject matter, not depth of topic, is the goal.

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**Undergraduate Program Learning Goals** (goals addressed in this course are in **bold**):

- Our students will be competent in their discipline.
- **Our students will be aware of the uses of technology in business.**
- Our students will be effective communicators.
- **Our students will have an interdisciplinary perspective.**
- **Our students will be knowledgeable about global business and trade.**
- Our students will recognize the importance of ethical decisions.
- Our students will be knowledgeable about the legal environment of business.
- **Our students will be knowledgeable about team dynamics and the characteristics of effective teams.**
- Our students will understand the value of diversity and the importance of managing diversity in the context of business.
- **Our students will be critical thinkers.**

**Course Objectives:**

- Build an understanding of how OM fits into the organization
- Provide a knowledge base for conversing with operations personnel
- Build both quantitative and qualitative analysis skills, especially those needed for managing important business tradeoffs
- Provide common sense modeling concepts, which can be used to help managers evaluate various problems that arise in practice
- Introduce real-world applications and their connection with OM
- Understand and appreciate the role of variability in an organization

**Slides, Additional Handouts & Readings:**

I will be posting the slides and spreadsheets that we will discuss in class on Blackboard. However, they will not be complete and will require your attention during lectures to complete them and add explanatory notes. You will find it useful to print them out prior to class and take notes on them during class. In addition to your text, I will be posting additional readings, cases, and news articles on Blackboard. We will use these to help motivate the concepts discussed in class and how they can be used to address real business issues effectively. We will also go through several in-class exercises. I will regularly send out emails through Blackboard. Please make sure you are checking all messages and taking the appropriate action. If you are not receiving my emails, please let me know as soon as possible.

**Grading Policy:**

Grading for the course will be based on **2 exams, a final, and in-class quizzes**. Participation can make a difference if you are borderline between two grades to boost your grade. Final course grades will be assigned according to the following weights:

<table>
<thead>
<tr>
<th></th>
<th>Weight</th>
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</thead>
<tbody>
<tr>
<td>Exams</td>
<td>25%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>40%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>10% (total)</td>
</tr>
</tbody>
</table>

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The target assignment for letter grades will be as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>90-100 points</td>
</tr>
<tr>
<td>B</td>
<td>80-89.99 points</td>
</tr>
<tr>
<td>C</td>
<td>70-79.99 points</td>
</tr>
<tr>
<td>D</td>
<td>60-69.99 points</td>
</tr>
<tr>
<td>F</td>
<td>Below 59.99 points</td>
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</tbody>
</table>

Final cumulated scores of the class will be analyzed to determine if an adjustment or curve is necessary. However, a curve will only help you. Therefore, if you have a 90% or more you will get an A in the class – I won’t curve to raise the minimum requirements for grades, only lower them if necessary. Depending on the distribution of the grades I may or may not assign +/- (i.e., A+, A, B+, B, C+, C).

**Quizzes:**

Quizzes will generally be given at the beginning of class and will take no longer than 10-15 minutes to complete. I will announce the class in which a quiz will be given, at least one class in advance (e.g., if there is a quiz on Thursday it will be announced on the Thursday right before it). The quiz topic will be announced as well as where or how you can find the material needed to answer the question(s). I may even tell you what the question will be ahead of time. The quizzes may be based on reading the text, the additional reading handed out in class, or an activity we did in class. If you arrive to class late, you might not have enough time to complete the quiz. **Makeup quizzes will not be given.** However, you will be able to drop your lowest 20% of the quizzes we take. For example, if there are 10 quizzes you will be able to drop your 2 lowest quizzes. Please note that I will not be using Blackboard to announce upcoming quizzes (i.e., announcement of an upcoming quiz will occur only during regular class meetings).

**Exam Policies:**

**Makeup exams will not be given.** Students missing a scheduled exam due to an official GMU event must **prearrange an alternate time** to take the exam. Other excused absences (for health reasons, etc.) must be documented, and the grade missed will be the average of the other exam scores. All other cases will receive a grade of zero for the missed exam. The Final Exam is comprehensive; however, Exams 1 and 2 are non-comprehensive. All exams are closed book, closed notes, individual efforts. You must bring a **blank Scantron** and **#2 pencils** to each exam. You may also bring **one two-sided** (8 ½ x 11 inches) **original hand-written or typed note and formula sheet** to each midterm and **three sheets to the final**.

To help students understand the material and prepare the exams, practice problems will be assigned. Students are expected to have their own Scantron sheet and calculator for each exam. Cell phones, smartphones, laptops, pagers, and other transmitting devices are not permitted during the exam at any time. These devices may not be used as a calculator and must be powered off during the exam. **Violation of these rules constitutes an Honor Code violation.** If there is an emergency situation that requires a transmitting device to be active, please contact the proctor prior to the exam. Students must have desks clear of all items during the test. Exams will be all multiple choice and True/False. Only the **Scantron** sheet will be graded – test answers on your test booklet will not be considered and all pencil marks on **Scantron** affecting grading are the responsibility of the student.

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**Homework Assignments:**

To help you understand the material and prepare for the exams, homework problems will be assigned and solutions will be provided. However, they will not be collected or graded. Note that problems in the exams will be closely related to the homework assignments and the quizzes. Please spend time solving them independent of homework solutions. I highly recommend you email me or see me if you have any questions or doubts about the homework assignments.

**Attendance:**

Attendance is voluntary. However, as mentioned earlier, makeup quizzes will not be given. Further, there may be material mentioned in class that is not covered in the text. If you miss a class, please ask your classmates about any minor schedule change and hints on upcoming quizzes discussed in that class.

**Classroom Etiquette:**

It is expected that you are courteous and professional to both your instructor and classmates. This includes, but is not limited to, turning off your cell phone during class. I reserve the right to ask you to leave the classroom if I consider your behavior disruptive to the delivery of the lecture or exam.

During class you are allowed to use a laptop or a tablet only for note-taking purposes. If during the class you are seen using your laptop or tablet for other than note-taking purposes you will be asked to turn off your device. If you want to use a voice/video recording device as a substitute of note taking, please discuss it with me before the class.

One of the most important things is to start the class on time. Students should make every effort to be at class on time and, if late, find a seat quickly and disturb the class as little as possible. In order to arrive on time, please make sure that you allow 30 minutes between this class and classes on main campus.

I will try to learn your names as fast as I can. To help me, please put a name tent on your desk in every class. In order to make this process quicker, I strongly encourage using it in every class and participating in the class discussion. As mentioned earlier, the latter will also help you if you are borderline between two grades at the end of the semester.

**Honor Code:**

Students are obligated to strict adherence to the University honor system and code as stated in the University Catalog. You are bound by the code to neither receive nor furnish any assistance of any kind by any means on any graded assignment, test, or quiz. Specifically:

- All work submitted for a grade, including tests, quizzes, and homework, are to be completed individually, on your own, and alone. Copying quiz or test answers from another student and/or allowing your answers to be copied by another student are strictly and absolutely forbidden.
- Communication and collaboration, or suspicion thereof, of any kind between students during tests and quizzes is strictly and absolutely forbidden.
- Using an impermissible aid on any quiz or test such as unauthorized notes or electronic devices with Internet or peer-to-peer connectivity is strictly and absolutely forbidden.
- Any evidence or suspicion of collaboration on graded material will be construed as an honor code violation.
- Removing an exam from the classroom and sharing information about exams with other students is strictly and absolutely forbidden.
- Unless the instructor has authorized use of such material, using quiz/test material from classes that were offered by the same instructor in previous semesters is also considered a violation.

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Any violations of the honor code will result in an immediate filing of formal charges with the University Honor Committee which will be aggressively pursued with great vigor. For more information on the University’s Honor Code, please visit oai.gmu.edu/honor-code/

E-mail Contact:

- I communicate remotely with students only by GMU e-mail. I will not reply to voice mail messages left on my GMU office telephone.
- For security and confidentiality, I will only reply to GMU e-mail addresses. E-mail from Yahoo, Gmail, Hotmail, or other free email providers will be deleted without reply.
- I will only reply to student e-mail that is signed with your full name and that states your course and section. E-mail without this information will be deleted without reply.

Special Needs:

Any student with special needs should bring them to the instructor’s attention no later than the second week of class. For students with any disabilities, please also contact the Office of Disability Services (ODS) at 703-993-2474. All academic accommodations must be arranged through the ODS. For more information, please visit ODS’s home page: http://ods.gmu.edu/

Tentative Schedule:

The following schedule is tentative. In general, even if the specific date of coverage may change slightly, the order of coverage should remain as presented below. Modifications may be made as the semester progresses and the appropriate changes will be announced in class. It is highly recommended that each text chapter be read lightly prior to the class during which they will be discussed. I will also be handing out several readings throughout the semester. Please make sure you read them to prepare for the class.

<table>
<thead>
<tr>
<th>Week</th>
<th>Day</th>
<th>Date</th>
<th>Topic (Tentative)</th>
<th>Chapter (9th ed.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fri</td>
<td>30-Aug</td>
<td>Introduction &amp; Operations Strategy</td>
<td>1 &amp; 2</td>
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<tr>
<td>2</td>
<td>Fri</td>
<td>6-Sep</td>
<td>New Product Development</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Fri</td>
<td>13-Sep</td>
<td>Process Analysis</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>Fri</td>
<td>20-Sep</td>
<td>Variability in Processes &amp; Service Operations</td>
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<tr>
<td>5</td>
<td>Fri</td>
<td>27-Sep</td>
<td>Waiting Line Management</td>
<td></td>
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<tr>
<td>6</td>
<td>Fri</td>
<td>4-Oct</td>
<td>Statistical Process Control and Review Session</td>
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<tr>
<td>7</td>
<td>Fri</td>
<td>11-Oct</td>
<td>Midterm I (from weeks 1 to 6)</td>
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<tr>
<td>8</td>
<td>Fri</td>
<td>18-Oct</td>
<td>Forecasting</td>
<td>4</td>
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<tr>
<td>9</td>
<td>Fri</td>
<td>25-Oct</td>
<td>Forecasting</td>
<td>4</td>
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<tr>
<td>10</td>
<td>Fri</td>
<td>1-Nov</td>
<td>Inventory Control</td>
<td>12</td>
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<tr>
<td>11</td>
<td>Fri</td>
<td>8-Nov</td>
<td>Inventory Control</td>
<td>12</td>
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<tr>
<td>12</td>
<td>Fri</td>
<td>15-Nov</td>
<td>Review Session</td>
<td></td>
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<tr>
<td>13</td>
<td>Fri</td>
<td>22-Nov</td>
<td>Midterm II (from weeks 8 to 12)</td>
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<td>14</td>
<td>Fri</td>
<td>29-Nov</td>
<td>Thanksgiving recess</td>
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<tr>
<td>15</td>
<td>Fri</td>
<td>6-Dec</td>
<td>Supply Chain Management</td>
<td>11</td>
</tr>
<tr>
<td>16</td>
<td>Fri</td>
<td>13-Dec</td>
<td>Final Exam (from weeks 1 to 15) @ 1:30-4:15pm</td>
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