OM 301: Operations Management

Spring 2011 Course Syllabus

Section 004

Timothy Porter

Location  Science Technology I 131.
Class Session  Monday and Wednesday from 7:30 AM to 8:45 PM.

Office Hours  Monday and Wednesday from 9:00 AM to 12:00 PM, and Wednesday 4:30 PM to 6:00 PM; or by appointment. My office: Enterprise Hall Room 149.
Phone  (703) 993-4697
Fax  (703) 993-1809
E-mail  tporter6@gmu.edu
Website  at https://gmu.blackboard.com/

Description
This course provides an examination of the principal functions of operations managers in various settings, with strong emphasis on service operations, in regard to how they operate and function. Analytic models are used to describe key planning and control activities. See the “Topics” section at the end of this syllabus for a list of subjects.

Prerequisites
1. OM 210, Statistical Analysis for Management, with a grade of C or better and sophomore standing. (All OM 210 prerequisites must be satisfied.)
2. Prerequisites are solely and strictly enforced by the Office of Academic and Career Advising without input from me. Students not meeting the prerequisites will be dropped without input from me.
3. Additionally, proficiency in elementary algebra is essential and is expected. Deficiencies in elementary algebra should be self-remediated.

Registration
1. I have no authority to resolve any issues concerning student registration. All matters relating to course registration are the exclusive domain of the Office of Academic and Career Services (OACS), and are handled solely by them without input from me. Contact OACS by phone at 703-993-1880 or send e-mail to somserv@gmu.edu.
2. There are no force-adds or schedule adjustments in SOM.
3. Students must be officially registered for the course to receive a grade. Students are solely responsible to verify their own registration status.

4. This course requires a minimum grade of C to satisfy SOM degree requirements, and students will not be permitted to make more than three attempts to achieve a C or higher in this course. Registration in this course will be prohibited beyond three attempts that resulted in a grade lower than C. If you have questions about this policy, please see an academic advisor in OACS in ENT 008.

**Required Textbook**

   - The 8th Edition supersedes and replaces all previous editions.
   - Do NOT get the “international” edition, as they are different.
   - I will not support any edition of the textbook other than that stated above.

2. The text is supplemental reading and is not a substitute or replacement for classroom instruction.

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

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

**ISOM Major Learning Goals** (Goals addressed in this course are in **bold**)

1. **Apply knowledge of information technology and business functions to understand its application in assessing, designing and improving business processes.**
2. Develop data organization, storage and processing solutions to support organizational needs for information management. They will also have the option of developing skills in the area of supporting decision making through business intelligence solutions.
3. Use knowledge of computer networks as part of the IT solutions for improving business processes. They will also have option of developing more advanced skills in the areas of network and security.
4. **Effectively manage information technology projects.**
5. Understand the overall systems development life cycle and be able to recommend IT system solutions accordingly. They will also have option of learning appropriate development tools to develop prototype of IT solutions for business management.

**Specific Course Objectives**
Consistent with SOM Undergraduate Program and ISOM goals, specific course objectives are:

1. To master the essentials of the concepts and methodologies of the tools of operations management, particularly regarding service operations.
2. To provide a sound basis in operations management for the student’s future academic and professional careers by applying the concepts and methodologies presented in the course to solve practical business problems.
3. To foster critical thinking and independent problem solving skills. Specifically, to gain the ability to independently analyze business data and to model business situations, and to understand and learn from the data.
4. To raise awareness of ethics in the practice of operations management.

**Approach**

1. Geared for the future business professional engaged in decision support and/or decision making. The emphasis is on practical business applications rather than on technical rigor. The format will be lectures, but discussions and questions are highly encouraged.
2. As the instructor, I am responsible for teaching the best course possible, including providing the best possible resources which promote learning. Students are individually and solely responsible for their own learning, including the application of the information presented, as demonstrated by performance on the graded homework, quizzes, and exams. I will use my office hours to meet with students individually to work with them on a one-to-one basis to help their understanding and mastery of the material.

**Disability**

All academic accommodations due to disability must be arranged through the Office of Disability Services (ODS). If you are a student with a disability and you require academic accommodations, please contact ODS at 703-993-2474. I will cooperate fully with the ODS to accommodate a student’s special needs.

**Honor Code**

1. Students are obligated to strict adherence to the University honor system and code as described in the University Catalog. You are bound by the code to neither receive nor furnish any assistance of any kind on any graded assignment, test, or quiz.
2. Specifically:
   - All work submitted for a grade, including tests, quizzes, and homeworks, are to be completed individually, on your own, and alone.
   - Communication and collaboration, or suspicion thereof, of any kind between students during tests and quizzes is strictly and absolutely forbidden.
   - Any evidence or suspicion of collaboration on graded homework will be construed as an honor code violation.
3. Any violations of the honor code will result in an immediate, automatic, and severe devaluation of the score on that test, quiz, or homework and the filing of formal charges to the university Honor Committee.

**Connectivity**

1. It is the student’s responsibility to have reliable and adequate Internet connectivity and access (including GMU computers available on campus).
2. For technical assistance, visit the ITU Support Center at http://itusupport.gmu.edu/ or call 703-993-8870 or send e-mail to support@gmu.edu. However, it is solely the student’s responsibility to determine and resolve connectivity and other problems.

E-mail Contact
1. I communicate remotely with students only by GMU e-mail. I will not reply to voice mail messages left on my GMU office telephone.
2. For security and confidentiality, I will only reply to GMU e-mail addresses.
3. I will only reply to student e-mail that is signed with your full name and that states your course and section. On every email, the subject line should start with OM301 followed by your section number.
4. I check and respond to e-mail during my posted office hours. I do not check or respond to e-mail at night after business hours or on the weekends.
5. Expect a response to an inquiry within 1 to 2 days after I read the e-mail.

Class Etiquette
Be courteous to and respectful of others in class. Please refer to the document “Lecture Etiquette” posted under the link “Getting Started.” Please be sure to turn all cell phone ringers off.

Class Participation
1. Performance is highly associated with class attendance and participation.
2. Students are expected to attend all scheduled classes.
3. Class participation consists of active engagement in the presentation of material and through questions and discussions.
4. The student is solely responsible for all assignments and material presented in class even if missed due to absence.

Course Website on Blackboard
1. Login to at https://gmu.blackboard.com/ and click on the link for OM 301.
2. My OM 301 course website consists of separate pages and links containing this syllabus; announcements and assignments, PowerPoint presentations, supplemental notes; solutions to some textbook and homework problems; and student grades. Note that the classroom presentations may be condensed and abridged versions (with shortened coverage and content) of the corresponding presentations available on the website.
3. The website is continually being maintained. During the semester, new documents may be created and existing documents may be modified as appropriate. Important course announcements will be posted at the bottom of the main page. You should check the website often, at least twice a week.
4. Students will be informed beforehand of the pertinent documents for the next class. It is recommended that students download the pertinent course documents before class and well before exams and assignment due dates. To alleviate the burden of taking notes in class and to give your full attention to the discussion, I recommend that you annotate my documents with your own notes as appropriate during class.
5. The student should be familiar with recent versions of MS Office products, especially MS Word, PowerPoint, and Excel.
6. The course website is an electronic medium to facilitate the transfer and dissemination of the course content. It is provided solely to augment classroom presentation and discussion of the material. The web site is not a substitute or replacement for attending class.

**Grading Metrics**
1. The metrics used for the final course grade are the scores earned on:
   - all three (3) tests,
   - all five (5) quizzes, and
   - all three (3) submitted and graded problem sets/case studies.
2. Each of the aforementioned grading instruments is described in the paragraphs below.
3. A numerical final course total score is calculated as the sum of scores earned on all tests, quizzes, and homeworks.
4. The final course letter grade is assigned objectively and strictly according to the numerical final course total score. (See “Course Grade” below. Maximum points = 1000)
5. There is no “extra credit” of any kind, for any reason. Final total point scores are NOT “bumped” or rounded up to the next higher letter grade.
6. All students should obtain 8 scantron cards that will be used for the tests and quizzes.

**Homework**
1. Mastery of the subject matter is measured by skill and proficiency in problem solving. Proficiency is gained by practice. The assigned homework should be considered the minimum amount of practice. (It is also a diagnostic tool by which the student may assess his or her understanding and performance.)
2. The three homework assignments will consist of problem sets or sample examination questions from the textbook chapters covered by the homework.
3. The first homework assignment will be assigned a maximum value of 20 points, the second and third homework assignment will be assigned values of 40 points each. Altogether, the graded homeworks count for up to 100 points of the final course score.
4. Late homework may be submitted late only under extreme emergencies AND at the sole discretion of the instructor. If a late submission is allowed, the homework will be charged a substantial deduction of points as a late penalty.
5. The three homework assignments and required due dates will be announced in class. Follow the instructions given for each homework assignment to be submitted.
6. The submitted homework is an individual effort. Absolutely NO collaboration of any kind is permitted. Any collaboration will be treated as an Honor Code violation.

**Quizzes**
1. Five mandatory, unannounced, unscheduled, “pop” quizzes will be given in class (at anytime during the class).
2. Each individual lecture quiz contributes the points scored (out of 20 points) to the final course score. Altogether, the quizzes count for up to 100 points of the final course score.
3. A quiz is generally a set of multiple choice or T/F questions (no more than 10). It may also consist of word problems. Quizzes may test your knowledge of any topics covered in the class lectures or in the reading assignments.
4. All quizzes are individual efforts. Absolutely NO collaboration of any kind is permitted. Any collaboration will be treated as an Honor Code violation.
5. A missed quiz will be assigned a score of zero. A missed quiz CANNOT BE MADE UP UNDER ANY CIRCUMSTANCES. (No exceptions, regardless of the reason, including [but not limited to] medical, family, work, and transportation emergencies.)

Tests
1. Three mandatory, non-cumulative, tests will be given, as announced. The tests will be comprehensive of the topics they cover.
2. Specific topic coverage of all the exams will always be announced and posted in advance of test dates. Each individual test contributes the points scored to the final course score. The tentative coverage and test valuation is as follows:
   - Test 1: Fundamentals and basic concepts of operations (worth up to 250 points).
   - Test 2: Designing operations (worth up to 250 points).
   - Test 3: Managing and maintaining operations (worth up to 300 points).
   Altogether, the tests count for up to 800 points of the final course score.
3. Exams will test concepts, technical skill, and critical thinking. The exams may consist of true/false, multiple choice, short answer questions, and/or word problems. Technical material will be covered by word problems; each problem may itself contain several or many parts. Partial credit for word problem solutions may be awarded, as appropriate.
4. Tests are primarily based upon the class presentation and discussion of the material as presented in class. However, some questions may test the students comprehension of subject matter in the reading assignments and which were not covered in the lectures.
5. The schedule of tests is to be announced. Advance notice of the date and specific coverage of each test will be given in class. Test 3, the final, will be given as stated in the published Final Exam Schedule (see “Schedule” below).
6. All tests are an individual effort. Absolutely NO collaboration of any kind is permitted. Any collaboration will be treated as an Honor Code violation.
7. Use of the textbook, class notes, etc., during exams is prohibited unless otherwise stated by me.
8. MISSED TESTS.
   - A missed test will be assigned a score of zero.
   - A missed test may be made up only under extreme circumstances, WITH supporting documentation, AND at the sole discretion of the lecture instructor. One and only one make-up (either test or quiz) is allowed. (See the “Make-ups” paragraph below).

Make-up Tests
1. One and only one (1) missed test can be made-up.
2. Taking a make-up is not automatic. You must qualify and register for any make-up with the lecture instructor (ONLY) prior to registration deadline. (You must provide a valid and bona fide reason for missing the test when it was originally scheduled, supported and verified by documentation. All decisions are final; there is no appeal.)
3. Re-testing to replace scores already earned on tests is strictly prohibited and will not be allowed under any circumstances.
4. Make-ups may be of a different format and level of difficulty than the original test.
5. A missed test will be assigned a score of zero until it is made-up. After the make-up, the grade on the make-up will replace the zero, to be added into the final total course score.
Course Grade
1. Students must be officially registered in this section to receive a grade. It is the sole responsibility of the student to verify their own registration status.
2. Final course grades are assigned on a point system with a maximum of 1000 points for the course, based on the final total point score for the course, which is the sum of the scores earned on all tests, quizzes, and graded homework assignments.
3. Final course grades will be assigned as whole letters, WITH plus and minus.
4. The final course grade is assigned objectively, rationally, and strictly according to the numerical final course total point score earned on all grading instruments. Final course letter grade assignments on the 1000 point system are given in the table below.
5. Final total point scores are NOT “bumped” or rounded up to the next higher letter grade (e.g., a final total point score of 799 will be assigned a course grade of C+ and not B-).
6. There is no “extra credit” of any kind, for any reason.

<table>
<thead>
<tr>
<th>COURSE TOTAL SCORE *</th>
<th>COURSE GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FROM</td>
<td>UP TO</td>
</tr>
<tr>
<td>970</td>
<td>1000</td>
</tr>
<tr>
<td>930</td>
<td>969</td>
</tr>
<tr>
<td>900</td>
<td>929</td>
</tr>
<tr>
<td>870</td>
<td>899</td>
</tr>
<tr>
<td>830</td>
<td>869</td>
</tr>
<tr>
<td>800</td>
<td>829</td>
</tr>
<tr>
<td>770</td>
<td>799</td>
</tr>
<tr>
<td>730</td>
<td>769</td>
</tr>
<tr>
<td>700</td>
<td>729</td>
</tr>
<tr>
<td>600</td>
<td>699</td>
</tr>
<tr>
<td>0</td>
<td>599</td>
</tr>
</tbody>
</table>

*Point ranges are inclusive.

Schedule
1. Refer to the Spring 2011 Schedule of Classes for the Academic Calendar (or go online to [http://registrar.gmu.edu/calendars/2011Spring.html](http://registrar.gmu.edu/calendars/2011Spring.html)).
2. The schedules for all “deliverables” will be announced during the semester. Advance notice of the dates and specific coverage will be announced in class and posted on my OM 301 course website.
3. The test make-up day is TBA. Time and location are TBA.
4. The last class is on Wednesday, May 4, 2011.
5. In conformity with the official Spring 2011 Final Exam Schedule promulgated by the Registrar’s Office ([http://registrar.gmu.edu/calendars/2011SpringExam.html](http://registrar.gmu.edu/calendars/2011SpringExam.html)), Test 3, the final exam, is scheduled for Wednesday, May 11, 2011, from 7:30 AM to 10:15 AM.
6. Conflicts in the final (Test 3) schedule can only be resolved through the Office of Academic and Career Services (and not me) at least one week prior to the date of the final, with the appropriate paperwork. Requests not meeting any part of this condition will be automatically denied.
Topics
1. The tentative list of topics is given below. The list follows the basic order and coverage of topics in the required text.
2. The list of topics is subject to change during the semester. Some sections in the text will be skipped, as announced. Some material not contained in the text may be presented in class, as will be noted.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Part I Basics of Operations</strong></td>
<td></td>
</tr>
<tr>
<td>1 Introduction to Operations Management</td>
<td>1</td>
</tr>
<tr>
<td>• Nature of services</td>
<td></td>
</tr>
<tr>
<td>• Types of operations</td>
<td></td>
</tr>
<tr>
<td>2 Operations Strategy in a Global Environment</td>
<td>2</td>
</tr>
<tr>
<td>3 Project Management</td>
<td>3</td>
</tr>
<tr>
<td>4 Forecasting</td>
<td>4</td>
</tr>
<tr>
<td><strong>Part II Designing Operations</strong></td>
<td></td>
</tr>
<tr>
<td>5 Design of Goods and Services</td>
<td>5</td>
</tr>
<tr>
<td>6 Managing Quality</td>
<td>6</td>
</tr>
<tr>
<td>7 Process Strategy</td>
<td>7</td>
</tr>
<tr>
<td>• Capacity Planning</td>
<td>Supp 7</td>
</tr>
<tr>
<td>8 Location Strategies</td>
<td>8</td>
</tr>
<tr>
<td>9 Layout Strategies</td>
<td>9</td>
</tr>
<tr>
<td><strong>Part III Managing and Maintaining Operations</strong></td>
<td></td>
</tr>
<tr>
<td>10 Supply Chain Management</td>
<td>11</td>
</tr>
<tr>
<td>11 Operations Technology</td>
<td>posted ppts</td>
</tr>
<tr>
<td>• E-commerce</td>
<td>Supp 11</td>
</tr>
<tr>
<td>• Business Disaster Recovery</td>
<td>posted ppts</td>
</tr>
<tr>
<td>12 Inventory Management</td>
<td>12</td>
</tr>
<tr>
<td>13 Short-term Scheduling</td>
<td>15</td>
</tr>
<tr>
<td>14 JIT</td>
<td>16</td>
</tr>
</tbody>
</table>