OM 303 012: Operations Management

Spring 2020 Course Syllabus

Professor Timothy Porter

Location  Buchanan Hall D0223
Class Session  Mondays and Wednesdays from 9:00 AM until 10:15 AM.

Office Hours  Wednesdays from 10:30 AM until 12:00 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 MyMason

Course Text
This section REQUIRES MyOMLab and the text book: Heizer, Render and Munson: Principles of Operations Management 11th edition. See the student registration instructions on BB for details on registering for MyOMLab. There are various options for acquiring the textbook. An electronic copy can be acquired through MyOMLab. New, used, and rented hardcopy textbooks may be purchased from various sources including the Mason Bookstore, Amazon, or elsewhere. You may purchase the registration code for MyOMLab through the bookstore or directly from the publisher at www.pearson.com/mylab or simply google MyOMLab and you will be directed to the MyOMLab website. You will need a course ID which is “porter46739”. Note that the 11th edition is a new edition. Therefore you will not find many “used” textbooks of the 11th edition. If you choose to use an older edition it is totally at your own risk.

School of Business Undergraduate Program Learning Goals

1. Our students will demonstrate an understanding of the social, global, ethical, and legal contexts of business and will be able to reflect on the role of the individual in business.

2. Our students will demonstrate an understanding of and the ability to apply knowledge of professional skills necessary for success in business including effective business writing.

3. Our students will demonstrate technical and analytic skills appropriate for success in business.
4. Our students will demonstrate an understanding of and the ability to apply knowledge of core business disciplines including accounting, finance, information systems, management, marketing, and operations management.

5. Our students will demonstrate knowledge and skills appropriate for specialization in their majors.

6. Our students will demonstrate an understanding of how research in the business disciplines contributes to knowledge and how such research is conducted.

Course Description
This Business core course provides an examination of the principal functions of operations managers in various settings, with a strong emphasis on service operations, in regard to how they operate and function. Analytic models are used to describe key planning and control activities. Operations Management (OM) is responsible for the production of goods and services in an organization. It not only has a significant impact on other areas such as marketing, finance, and accounting within an organization, but more importantly, also impacts the external customers of the organization. It is therefore no surprise that the performance of an organization is often largely determined by the performance of its operations area. To gain competitive advantage, operations managers pursue effectiveness and efficiency in value-adding processes at both not-for-profit and for-profit organizations. This course exposes students to a wide range of OM subjects including operations strategy, process selection, lean management, project management, quality management, inventory control, and supply chain management. Students develop both qualitative and quantitative OM skills through course lectures, class discussions, homework exercises, and hands-on games.

Prerequisites
1. Prerequisites: Grade of C or higher in each of the following courses: ACCT 203 or ACCT 204, BUS 100 or SOM 100, BUS 210, MATH 108 or MATH 113 or MATH 114 or HNRT 225. Degree status. Prerequisite enforced by registration system. (BUS 103 and BUS 200 are strongly recommended)
2. Proficiency in elementary algebra is essential and is expected. Deficiencies in elementary algebra should be self-remediated.
3. Familiar with their calculator, EXCEL, and other MSOffice applications is expected.

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.
2. There are no force-adds or schedule adjustments in School of Business.
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 School of Business 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.
Program Learning Goals (addressed goals are in bold)
1. Our students will demonstrate an understanding of the social, global, ethical, and legal contexts of business and will be able to reflect on the role of the individual in business.
2. Our students will demonstrate an understanding of and the ability to apply knowledge of professional skills necessary for success in business including effective business writing.
3. Our students will demonstrate technical and analytic skills appropriate for success in business.
4. Our students will demonstrate an understanding of and the ability to apply knowledge of core business disciplines including accounting, finance, information systems, management, marketing, and operations management.
5. Our students will demonstrate knowledge and skills appropriate for specialization in their majors.
6. Our students will demonstrate an understanding of how research in the business disciplines contributes to knowledge and how such research is conducted.

Course Objectives
Consistent with School of Business Undergraduate Program and ISOM goals, specific course objectives are for the student to:
- To master the essentials of the concepts and methodologies of the tools of operations and supply chain management, particularly regarding service operations.
- To gain a sound basis in operations and supply chain management by applying the concepts and methodologies presented in the course to solve practical business problems.
- To foster critical thinking and independent problem solving skills. Specifically, to gain the ability to independently analyze operational business data and to model business situations, and to understand and learn from the data.
- Understand the components of operations and supply chain management and how they are related to other major business decision areas.
- To raise awareness of ethics in the practice of operations and supply chain management.
- Analyze and improve business processes by using quantitative and qualitative tools.
- Learn project management techniques.

Course 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.

Learning Tools for the Course
Lectures: It is expected that each student be prepared for class including having read and prepared assigned material. My teaching philosophy is based on the belief that learning is an
active process. To be successful in learning the concepts, you must be actively engaged in the material. My lectures are interactive. The purpose of the classroom experience is to help you better understand and apply the concepts you have learned from the text, readings, and homework. We will use exercises and a discussion-oriented lecture format to help us to do this.

Participation and Attendance in Class: Attendance in this class is highly recommended in order to be successful in learning the course content. Students are expected to be on time and attend all class sessions. Participation will be graded on a regular basis. The quality of contribution is more important than the quantity of "airtime." Students will often be called on at random to participate in the class discussion and solutions for in class activities. I expect everyone to be attentive during class and add to everyone else’s learning experience by voluntarily participating in discussions, asking questions, answering questions, bringing in real-world examples pertinent to class topics. Note that participation credit cannot be obtained unless you are in class. The student is solely responsible for all assignments and material presented in class even if missed due to absence.

In-class Exercises: These are in-class learning experiences, possibly completed in a group environment. In-class exercises are designed to reinforce the topics learned in the class. Students are typically given a fixed amount of time to complete each exercise. In-class exercises will occur in coordination with the flow of topics being covered and as needed to reinforce important topics. Therefore you will not know when one will take place in class. Full credit is given if you are present in class and attempt the exercise. They are not graded for correctness. Make-up in-class exercises are not allowed under any circumstances. DO NOT ASK FOR SPECIAL PERMISSION FOR A MAKE-UP. IT WILL NOT BE GRANTED.

Homework Assignments: Homework may be assigned at any time during the semester, usually at the end of a chapter. Homework will be assigned via MyOMLab and will be due weekly (as specified by the Professor and posted in MyOMLab). Homework will usually be due Monday night at 11:59 pm. The specific assignments will be posted on MyOMLab and the due dates indicated within MyOMLab. Late homework will be accepted up to 5 calendar days after it is due with a penalty of 10% per day late. Thus, if homework is due Monday by 11:59pm and it is completed by Tuesday at 11:59pm, the maximum that can be earned is 90%. The last day the homework that was due Monday at 11:59 pm could be turned in would be the following Saturday at 11:59 pm for a maximum of 50%. After that time (5 days), it receives a 0. Please note that these are INDIVIDUAL assignments and by the Honor Code discussed below you are to complete them as such. The assignments may reference one or more chapters. Together the homework assignments will constitute 10% of the course grade. Occasionally there may be a question on the homework that was not covered in class. In such a case you should read the textbook relevant sections and answer the question to the best of your ability.

MyOMLab: Mastery of the subject matter is measured by skill and proficiency in problem solving. Proficiency is gained by practice. The assigned problems should be considered the minimum amount of practice. To help you gain mastery, MyOMLab offers additional resources such as the Study Plan and the Dynamic Study Modules. You are highly encouraged to use these resources for practice and understanding of the topics.

Quizzes:
1. Five mandatory, scheduled quizzes will be given in class (at anytime during the class).
   The quizzes will be announced in class at some point preceding the quiz. The advance
warning may be as little as one class meeting prior. A missed quiz will be assigned a score of zero. A missed quiz CANNOT BE MADE UP. An optional Quiz #6 will be offered toward the end of the semester. The score on this quiz may be used to replace any previous quiz score.

2. A Scantron and #2 pencil are needed for each quiz.
3. A quiz is generally a set of multiple choice or T/F questions, and 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. Use of the textbook, class notes, etc., during quizzes is prohibited unless otherwise stated by the instructor.
5. All quizzes are individual efforts unless otherwise stated by the instructor.

Examinations: During the semester, there will be two midterms given during the regular class period and one final examination. 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. The midterms and final examination are closed book and closed note exams. Two 1-sided or one 2-sided page of student prepared notes may be used on the exams. Information presented in class, videos, slides, the book and by any guest speakers may be included on the examinations. You must bring a blank Scantron, calculator, and #2 pencils to each exam. The schedule for the midterm exams will be announced in class and on the course website at least two weeks in advance. Midterm #1 is planned to cover Part 1 of the topics listed below. Midterm #2 is planned to cover Part 2 of the topics listed below. Coverage for the two midterms may be adjusted based on progression in the course or other issues. These changes will be announced in class and on the website well in advance. The final examination is cumulative and is given only at the specified time as published by the University Registrar. IF YOU CANNOT TAKE THE FINAL OR MIDTERMS AT THE TIME SHOWN ON THE SCHEDULE, DO NOT REGISTER FOR THIS CLASS. All tests are an individual effort. Absolutely NO collaboration of any kind is permitted. Any collaboration will be treated as an Honor Code violation.

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 (valid, per university policy, documented excuse) AND at the sole discretion of the instructor. One and only one make-up is allowed. (See the “Make-ups” paragraph below).

Make-up Tests:
1. One and only one (1) missed test (not quiz) can be made-up.
2. Taking a make-up is not automatic. You must qualify and register for any make-up with the instructor. You must provide a valid and bona fide reason (per university policy) 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.

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.

Course Website on Blackboard
1. The OM 303 course website contains this syllabus; announcements and assignments, PowerPoint presentations, supplemental notes; 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.**
2. 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 on the Announcements Page. **You should check this course site on Blackboard often, at least twice a week.**
3. 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.
4. 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.
5. Students should also frequently check MyOMLab for new assignments and for individual study.

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 homework, are to be completed individually, on your own, and alone. Study groups are encouraged but all work submitted for a grade must be your own.
   - 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 work will be construed as an honor code violation.
3. Any violations of the honor code will be reported as required to the Office of Academic Integrity.
### School of Business Recommendations for Honor Code Violations

*Adopted by the faculty May 2012*

**UG-Non Freshman Students (including transfer students)**

<table>
<thead>
<tr>
<th>Type of Violation</th>
<th>First Offense</th>
<th>Second Offense</th>
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</thead>
<tbody>
<tr>
<td><strong>Plagiarism</strong>—failure to cite/attribute sources</td>
<td>An F in the class; multiple visits to the Writing Center required; and Academic Integrity Seminar Attendance</td>
<td>An F in the class; multiple visits to the Writing Center required; Academic Integrity Seminar Attendance; dismissal from the program; and possible suspension or expulsion</td>
</tr>
<tr>
<td><strong>Plagiarism</strong>—representing someone else’s work as the student’s own</td>
<td>An F in the class; multiple visits to the Writing Center required; and Academic Integrity Seminar Attendance</td>
<td>An F in the class; multiple visits to the Writing Center required; Academic Integrity Seminar Attendance (at times of hearing and reenrollment if relevant); dismissal from the program; and possible suspension or expulsion</td>
</tr>
<tr>
<td>Cheating on an assignment, homework, class participation, or minor project</td>
<td>An F in the class; and Academic Integrity Seminar Attendance</td>
<td>Expulsion</td>
</tr>
<tr>
<td>Cheating on a major project, test, or exam</td>
<td>An F in the class; Academic Integrity Seminar Attendance; and at least one semester suspension</td>
<td>Expulsion</td>
</tr>
<tr>
<td>Egregious Violation [e.g., stealing an exam; submitting coursework from another class as original work; lying to an employer about academic performance]</td>
<td>Dismissal from the program; at least one year suspension; and attendance at Academic Integrity Seminar at the time of hearing and just prior to reenrollment</td>
<td>Expulsion</td>
</tr>
</tbody>
</table>

### Connectivity

1. It is the student’s responsibility to have reliable and adequate Internet connectivity and access (including GMU computers available on campus).
2. Some sessions may require a computing device as required by the School of Business laptop policy ([http://business.gmu.edu/undergraduate/policiesproceduresforms/](http://business.gmu.edu/undergraduate/policiesproceduresforms/)). These sessions will be announced.
3. For technical assistance, visit the ITU Support Center.

### Class Etiquette

Be courteous to and respectful of others in class. Please be sure to turn all cell phone ringers off. Cell phones, pagers, and other communicative devices are not allowed in this class. Please keep them stowed away and out of sight. Laptops or tablets may be permitted for the purpose of taking notes only. Engaging in activities not related to the course (e.g., gaming, email, chat, etc.) will result in a significant deduction in your participation grade.

### E-mail Contact

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 @gmue du 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.
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. 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.
3. I check and respond to e-mail at various times during the work day, and I will usually respond to you within 24 hours. However it may be longer during busy periods. I do not respond to email on the weekends.
4. Expect a response to an inquiry within 1 to 2 work days after I read the e-mail.

**Grading Metrics**

1. Grades are determined by the number of points accumulated during course up to 1,000 pts. The grading scale is below.

<table>
<thead>
<tr>
<th>Grading Instrument</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>100</td>
</tr>
<tr>
<td>In class exercises/class participation</td>
<td>50</td>
</tr>
<tr>
<td>• Quizzes (5)</td>
<td>150</td>
</tr>
<tr>
<td>Midterm Exam #1</td>
<td>200</td>
</tr>
<tr>
<td>Midterm Exam #2</td>
<td>200</td>
</tr>
<tr>
<td>Final Exam</td>
<td>300</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1000</strong></td>
</tr>
</tbody>
</table>

2. Each of the aforementioned grading instruments is described in this syllabus.
3. A numerical final course total score is calculated as the sum of scores earned.
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 scantron cards that will be used for the tests and quizzes.

**Quiz and Test Grading**

The instructor will review every quiz and test in class, usually at the next class meeting. Any student wanting further review or wishing to appeal the grade can do so during office hours or at a separately scheduled meeting with the instructor. In either case the student must confirm the meeting by email to the instructor. All grades are considered final one week after being posted to Blackboard. It is the student’s responsibility to check the website frequently.
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. **IT IS THE STUDENT'S RESPONSIBILITY TO MONITOR HIS OR HER GRADE STATUS BY REFERRING TO THE GRADE BOOK ON BLACKBOARD. YOUR SCORE AT ANY TIME IS POINTS EARNED DIVIDED BY POINTS POSSIBLE. THIS SHOULD BE DONE THROUGHOUT THE SEMESTER.**
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>
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<tbody>
<tr>
<td>FROM UP TO</td>
<td></td>
</tr>
<tr>
<td>970 1000</td>
<td>A+</td>
</tr>
<tr>
<td>930 969</td>
<td>A</td>
</tr>
<tr>
<td>900 929</td>
<td>A-</td>
</tr>
<tr>
<td>870 899</td>
<td>B+</td>
</tr>
<tr>
<td>830 869</td>
<td>B</td>
</tr>
<tr>
<td>800 829</td>
<td>B-</td>
</tr>
<tr>
<td>770 799</td>
<td>C+</td>
</tr>
<tr>
<td>730 769</td>
<td>C</td>
</tr>
<tr>
<td>700 729</td>
<td>C-</td>
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<tr>
<td>600 699</td>
<td>D</td>
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<tr>
<td>0 599</td>
<td>F</td>
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</tbody>
</table>

*Point ranges are inclusive.

Schedule
1. Refer to the Spring 2020 Schedule of Classes for the Academic Calendar.
2. The test make-up day is TBA. Time and location are TBA.
4. The last class is on **Wednesday, April 29th**.
5. In conformity with the official Final Exam Schedule promulgated by the Registrar’s Office, the final exam is scheduled for **Monday, May 11th from 7:30 AM to 10:15 AM**.
6. Conflicts in the final exam schedule can only be resolved through the Office of Academic and Career Services 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>Introduction to Operations Management</td>
<td>1</td>
</tr>
<tr>
<td>Operations Strategy in a Global Environment</td>
<td>2</td>
</tr>
<tr>
<td>Project Management</td>
<td>3</td>
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<tr>
<td>Forecasting</td>
<td>4</td>
</tr>
<tr>
<td><strong>Part II Designing Operations</strong></td>
<td></td>
</tr>
<tr>
<td>Design of Goods and Services</td>
<td>5 (plus portions of the supplement)</td>
</tr>
<tr>
<td>Managing Quality</td>
<td>6 (plus portions of the supplement)</td>
</tr>
<tr>
<td>Process Strategy</td>
<td>7 (plus portions of the supplement)</td>
</tr>
<tr>
<td>Location Strategies</td>
<td>8</td>
</tr>
<tr>
<td>Layout Strategies</td>
<td>9</td>
</tr>
<tr>
<td><strong>Part III Managing and Maintaining Operations</strong></td>
<td></td>
</tr>
<tr>
<td>Supply Chain Management</td>
<td>11 (plus portions of the supplement)</td>
</tr>
<tr>
<td>Inventory Management</td>
<td>12</td>
</tr>
<tr>
<td>Short Term Scheduling</td>
<td>15</td>
</tr>
<tr>
<td>JIT, TPS and Lean Operations</td>
<td>16</td>
</tr>
</tbody>
</table>