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.

Prerequisites

Grade of C or higher in each of the following courses: BUS 210, ACCT 203, and MATH 108. 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. There are no force-adds or schedule adjustments in School of Business. Students must be officially registered for the course to receive a grade. Students are solely responsible to verify their own registration status. 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.

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.

Special 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.

Lecture Format

All lectures will be held on Zoom in the form of synchronous online classes. I will post the Zoom link for our meetings on Blackboard before the first class, and you are required not to share the link with anyone else. Each meeting begins 10min before our regular lecture time, so you can join early and chat with classmates before class. Upon entry, your video is on and your audio is off, and you can unmute yourself before lecture. When lecture starts, I will mute all participants and you are strongly encouraged to keep your video on and actively participate using the “raise hand” feature in Zoom. I may record Zoom meetings and upload the videos to Blackboard, but they are not substitute for our synchronous classes, which you are required to attend and participate.

In case a synchronous class is interrupted due to unforeseeable events (e.g., technical issues), you are expected to stay on line for 30 minutes. I will try to resolve the issue, and if it persists, I will send an email to make arrangement for the rest of the lecture (e.g., as an asynchronous class).

Technology Requirements

Since all lectures and exams will be held online as synchronous classes, you are required to have access to a computer with a functional camera and microphone, and stable Internet connection that can support video conferencing during the time of lectures and exams. You are also required to have available on your computer up-to-date Zoom, LockDown Browser, and Respondus Monitor, and are required to know how to use them to participate in lectures and take exams. See https://its.gmu.edu/service/zoom/ and https://its.gmu.edu/service/respondus-lockdown-browser-monitor/ for ITS software support.

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 two midterm exams, a final exam, quizzes, homework, and class participation. The course grade will be out of 100 points. The breakdown is as follows. Your total point score out of 100 determines your final letter grade.

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Quizzes</td>
<td>10%</td>
</tr>
<tr>
<td>Graded Homework</td>
<td>15%</td>
</tr>
<tr>
<td>Midterm Exam #1 (Non-Cumulative)</td>
<td>20%</td>
</tr>
<tr>
<td>Midterm Exam #2 (Non-Cumulative)</td>
<td>20%</td>
</tr>
<tr>
<td>Final Exam (Cumulative)</td>
<td>25%</td>
</tr>
<tr>
<td>Participation &amp; Professionalism</td>
<td>10%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
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</tbody>
</table>

Grading Scale: A = 90-100; B = 80-89.99; C = 70-79.99; D = 60-69.99; F = below 59.99. 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. 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 use the +/- system.

Quizzes

Quizzes will be given online before class and the submission deadline will typically be at one minute before the class starts. Each quiz will generally take no longer than 10-15 minutes to complete. I will announce quizzes and offer hints in lecture at least one class in advance. Quiz topics will be announced as well as where or how you can find the material needed to answer the question(s). The quizzes may be based on lecture-note slides, additional readings, or an activity we did in class. 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 5 quizzes you will be able to drop the lowest quiz. 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). All quizzes are closed book, closed notes, individual efforts. Formula sheets are not allowed during the quizzes.

Homework Assignments

To help you understand the material and prepare for the exams, homework problems will be assigned, usually at the end of a chapter. The specific assignments will be posted on Blackboard and only part of them are graded and you are expected to submit the answers of graded homework by handwriting all steps and answers on paper and uploading a photocopy to Blackboard before deadline (typically one minute before class; I will announce the exactly location to submit on Blackboard when assigning homework). Late homework will be accepted up to 3 calendar days after it is due with a penalty of 20% per day late. Homework submitted after the 3-day late period will receive a score of zero. Detailed solutions will be provided after the 3-day late period. Please
note that these are INDIVIDUAL assignments and by the Honor Code discussed below you are required to complete them independently and not share solutions with others.

Apart from graded problems, I will also assign homework problems that will not be graded. These problems will be posted with solutions on Blackboard, and they will help you in solving graded homework problems. Also note that problems in the exams will be closely related to the homework assignments and the quizzes. Please spend time solving non-graded homework problems independent of solutions. I highly recommend you email me if you have any questions or doubts about homework assignments.

**Exam Policies**

**Makeup exams will not be given.** IF YOU CANNOT TAKE THE FINAL AT THE TIME SHOWN, DO NOT REGISTER FOR THIS CLASS. NO MAKEUPs WILL BE GIVEN without a valid, per university policy, documented excuse. 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 cumulative; however, the midterm exams are non-cumulative. **All exams are closed book, closed notes, individual efforts, and are conducted online using LockDown Browser and Respondus Monitor. You should have a scientific calculator, a pen, and some scratch papers on hand in exam; no other devices or materials are allowed.** All necessary formulas and Tables will be provided in exam problems. Violation of these rules constitutes an Honor Code violation. A study guide and practice problems will be provided for each exam.

**Participation & Professionalism**

All students are expected to contribute in the (online) classroom and behave professionally throughout the semester. Quality of contribution in class is much more important than quantity. I recognize that not all students are equally comfortable with participating in class; however, this is a relatively low risk environment in which to practice skills that you will need later in life. Participation & Professionalism consists of three parts.

- **Participation (8%)**: After each session, you should report what comments you have made during the class through the self-reported participation forum under the discuss board on Blackboard unless specified otherwise by the instructor. For each session, I will post a thread before the class. You should reply to the thread to report your participation within 72 hours, starting from the moment the class ends. Instructions will be posted on Blackboard as well. Late replies will NOT be considered. The self-report will be combined with the instructors note to determine your participation score.

  You should report your participation ONLY IF you have spoken up individually during the class unless specified otherwise by the instructor. If I ask the entire class to give answers during the class (e.g., a Zoom poll), it will not be counted as speaking up individually and you should not report it. Reporting false participation notes is a violation of honor code.

- **Self-introduction blog (2%)**: For effective class discussion, at the beginning of the semester you are asked to write an introductory blog post about yourself (with a clear selfie or photo of
you) on Blackboard to help me and your peers recognize you. The deadline and instructions for this assignment will be specified on Blackboard.

- **Professionalism:** All students should conduct themselves in a professional manner. This includes factors such as attending lectures on time, keeping the video on, being prepared and participating in the class by asking and answering questions thoughtfully, and handling all course-related communication in a professional manner. You should let me know in-advance if you were unable to attend a class, just as you would if you were unable to attend a business meeting you were invited to. If you miss a class session, you are responsible for the content of that day’s discussion and for finding out from your classmates what was discussed. Exhibiting any unprofessional behavior, including but not limited to engaging in activities that are unrelated to the class (such as surfing the web, texting others, eating food during the class, etc.), disrupting the class (e.g., sending irrelevant messages in Zoom chat box), and failing to notify me in-advance about your absence, shows a lack of professionalism and may negatively affect your participation grade.

**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.

**Disability**

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/](http://ods.gmu.edu/).

**Diversity and Inclusion**

The School of Business seeks to create a learning environment that fosters respect for people across identities. We welcome and value individuals and their differences, including gender expression and identity, race, economic status, sex, sexuality, ethnicity, national origin, first language, religion, age and ability. We encourage all members of the learning environment to engage with the material personally, but to also be open to exploring and learning from experiences different than their own.

**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.

Sharing information about exams with others (including online) 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.

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 http://oai.gmu.edu/the-mason-honor-code/. The list with The School of Business Recommendations for Honor Code Violations can be found on Blackboard, in the “Getting Started” section of the class.

Student Support Resources

A complete list of student support resources on campus may be found at and downloaded from here.

Religious Holidays

Students who will miss class for religious reasons should inform the instructor of their anticipated absences during the first two weeks of the semester. The religious holiday calendar may be found at and downloaded from https://ulife.gmu.edu/religious-holiday-calendar/.

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>Day</th>
<th>Date</th>
<th>Topic (Tentative)</th>
<th>Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fri</td>
<td>28-Aug</td>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>Fri</td>
<td>4-Sep</td>
<td>Strategy &amp; Design</td>
<td>2 &amp; 5</td>
</tr>
<tr>
<td>Fri</td>
<td>11-Sep</td>
<td>Process Management I</td>
<td>7 &amp; JC7</td>
</tr>
<tr>
<td>Fri</td>
<td>18-Sep</td>
<td>Process Management II</td>
<td>JC11</td>
</tr>
<tr>
<td>Fri</td>
<td>25-Sep</td>
<td>Service Operations I</td>
<td>JC9</td>
</tr>
<tr>
<td>Fri</td>
<td>2-Oct</td>
<td><strong>Midterm I</strong></td>
<td></td>
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<tr>
<td>Fri</td>
<td>9-Oct</td>
<td>Service Operations II</td>
<td>JC10</td>
</tr>
<tr>
<td>Fri</td>
<td>16-Oct</td>
<td>Quality Management</td>
<td>6 &amp; JC13</td>
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<tr>
<td>Fri</td>
<td>23-Oct</td>
<td>Forecasting</td>
<td>4</td>
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<tr>
<td>Fri</td>
<td>30-Oct</td>
<td>Inventory Management I</td>
<td>12</td>
</tr>
<tr>
<td>Fri</td>
<td>6-Nov</td>
<td>Inventory Management II</td>
<td>12</td>
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<tr>
<td>Fri</td>
<td>13-Nov</td>
<td><strong>Midterm II</strong></td>
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<tr>
<td>Fri</td>
<td>20-Nov</td>
<td>Supply Chain Management</td>
<td>11</td>
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<tr>
<td>Fri</td>
<td>27-Nov</td>
<td>Thanksgiving Recess</td>
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<tr>
<td>Fri</td>
<td>4-Dec</td>
<td>Review</td>
<td></td>
</tr>
<tr>
<td>Fri</td>
<td>11-Dec</td>
<td><strong>Final Exam @ 10:30 am – 1:10 pm</strong></td>
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