

OPMGT 301: Principles of Operations Management

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Instructor:

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Course Overview:

Operations Management (OM) is the design, management and improvement of the processes that transform inputs and resources into finished goods and services. Since this transformation is the primary mechanism of value-creation in a firm, world-class performance in operations is fundamental for a company's competitive success.

This course is aimed at introducing the basic terminology and concepts of Operations Management. Our goal is to give you a solid foundation and a set of analytical tools for understanding the decisions and tradeoffs managers must make as they direct the operations of a firm.

Why is the operations function important? Recent past has highlighted the fundamental role OM plays in a company's success or failure. Many companies have witnessed a decline in market share as a result of their inability to compete on operational dimensions of cost, quality, availability, and flexibility. Most now agree that continuous improvement in operational performance is essential for their long-term survival. Current business climate offers exciting times for operations managers. Forces of globalization, breaking of information barriers

between organizations and the requirements of quality and customer service are creating many new opportunities and challenges for business operations.

Why should you study operations? Some students who enroll in this course will start their own companies or go to work in the operations of a manufacturing or service company; for these people the course is essential. Many more will go to work in professional services, such as investment banks or consulting firms. Here, too, a good set of diagnostic and analytical tools in operations is invaluable. Consulting engagements often have a large operational component as the consultants help the client company to restructure its operations. To properly value a merger or acquisition, investment bankers must understand the costs and benefits of combining the companies' operations. Operations Management is a central activity of a company and has close linkages to Marketing, Finance, Accounting, Human Resources and Information Systems. Therefore, an important focus of this course is to highlight the value of smart operations decision-making to non-OM majors.

Prerequisites:

You should have taken the prerequisite courses specified in the course schedule. In particular, you should be comfortable with random variables, basic probability, and normal distributions, etc. You should have working knowledge of Microsoft Excel®. The coursework will require frequent use of calculators.

Academic integrity:

By being a student in this course you acknowledge that you are a part of a learning community at the Foster School of Business that is committed to the highest academic standards. As a part of this community, you pledge to uphold the fundamental standards of honesty, respect, and integrity, and accept the responsibility to encourage others to adhere to these standards.

Students with Special Needs:

Please contact me ASAP so that all the necessary arrangements for the exams can be made.

University of Washington Religious Accommodations Policy

Any student seeking reasonable accommodations must provide written notice to the Office of the University Registrar of the specific dates of absence due to religious accommodation, within the first two weeks of the beginning of the course. Students who have requested and been denied a religious accommodation and wish to file a complaint should contact the [University Complaint Investigation and Resolution Office \(UCIRO\)](#) . UCIRO is responsible for investigating complaints that a university employee has violated the University's nondiscrimination policies, including a failure to accommodate a student under this policy.

Technology Courtesy Policy

The Foster Undergraduate Program is committed to providing an active learning environment where student participation and engagement is valued. In the spirit of creating such an experience in the classroom, I permit use of laptops or tablets for the explicit use of note-taking, watching course related video, doing in-class exercises, and accessing my course management tools in Canvas. That being said, in so far as these devices are used as part of the course activity, students should refrain from using any features or applications that do not directly relate to the course or are not approved as part of the lecture/discussion. Using features such as Facebook, Twitter, email, instant messaging, cameras, texting, and phone calls will not be permitted. If a question comes up about a technology used during my course, I will give you *one warning* to refrain from its use. If you do not adhere to this as my course policy participation grade will be lowered.

COVID-19 Mask Policy

Please remember that the current Washington State [indoor mask mandate](#), which took effect Aug. 23, requires everyone to wear a mask indoors. The University of Washington requires students and UW personnel [to attest to their vaccination status](#). The University also has [COVID-testing requirements](#) for students who receive an exemption from the UW's vaccination mandate. Please note that these standards are continually evolving and subject to change.

Course Materials:

- Lecture slides will be posted to Canvas before each class; after the class, Assignment problem sets, sample exams, and the solutions will also be posted as the course progresses.
- The textbook is recommended but not required: William J. Stevenson, *Operations Management*, Eleventh or Later Editions, McGraw-Hill/Irwin.

Homework:

- There will be 4 required homework assignments. They should be turned in via Canvas on the date specified (by 11:59 PM of the due date). Late submissions with delays of less than 24 hours will be given half credit at most. Late submissions with delays of more than 24 hours will NOT be accepted. If you know that your assignment will be late due to some special circumstances, contact me in advance to make a special arrangement.
- It is critical that everyone first attempts to set up and solve each of the problems in the assignments on your own. Although it is fine to discuss or get help from classmates at this point, each problem should be set up and solved by the individual based on their own understanding of the materials. Copying others' answers is prohibited.

Exams:

- There will be a **midterm exam** on **Wednesday, November 3 (1:30 – 3:20 PM)** and a **final exam** on **Monday, December 13 (2:30 – 4:20 pm)**. The final exam is non-cumulative. The final exam is non-cumulative.
- The two exams will be closed-book and closed-notes, you may bring two double-sided sheets of notes (i.e., four sides at most).
- If you are unable to attend the exams at the scheduled time, a written explanation via email and arrangements with me must be made at least one week before the scheduled exam times. Otherwise, no make-up exams would be given.

Exam and homework grading:

If you believe that an error was made in grading by the grader, you should write a short justification of your claim to the TA to receive further feedback. If the dispute cannot be resolved, please let me know.

Participation:

- Low attendance will affect your participation grade. More importantly, failure to attend classes may adversely affect your understanding of the material and hence your grade. Contributions that add new insights or advance the discussions, including clarifying questions, will be credited.
- Participating in the **Beer Game** is required.

Evaluation:

Your course grade will be determined as follows:

Grading Item

35% Midterm Exam

35% Final Exam

25% Homework

5% Participation (including Beer Game)

Schedule

Week	Date	Topic	Note
1	Wed Sep 29	Linear Programming 1	
2	Mon Oct 4	Linear Programming 2	
	Wed Oct 6	Linear Programming 3	
3	Mon Oct 11	Problem Session 1: Applications of LP	
	Wed Oct 13	Inventory Management 1	HW#1 Due
4	Mon Oct 18	Inventory Management 2	
	Wed Oct 20	Inventory Management 3	
5	Mon Oct 25	No class	Professor will attend a national annual conference
	Wed Oct 27	Inventory Management 4	HW#2 Due
6	Mon Nov 1	Problem Session 2: Midterm Review	
	Wed Nov 3	Midterm Exam (1:30 – 3:20 PM)	
7	Mon Nov 8	Project Management 1	
	Wed Nov 10	Project Management 2	
8	Mon Nov 15	Project Management 3	
	Wed Nov 17	Service Operations – Queueing Systems 1	
9	Mon Nov 22	Service Operations – Queueing Systems 2	
	Wed Nov 24	Service Operations – Queueing Systems 3	HW#3 Due
10	Mon Nov 29	Statistical Quality Control	
	Wed Dec 1	Aggregate Planning and MRP	
11	Mon Dec 6	Beer Game (Supply Chain Management)	
	Wed Dec 8	Problem Session 3: Final Review	HW#4 Due
12	Mon Dec 13	Final Exam (2:30 – 4:20 pm)	