
OM 334M: Healthcare Operations Management (Spring 2022)

SYLLABUS

(Revised January 17, 2022)

SEE COVID-19 and Class Modality Section

#04735: Mon. & Weds. 12:30 PM

Professor: Edward Anderson

Office: CBA 3.424

Mailbox: CBA 5.202

Office Hours: TBD

Classroom: Virtual through Jan. 28, SZB 2.802 after

Instructor E-Mail: edanderson@utexas.edu

When sending email, please put “OM334M” in subject line

TA: TBD

COURSE DESCRIPTION:

Operations Management (OM) is the cost-effective management of resources to achieve organizational goals. OM focuses on the systematic planning, design, operation, control, and improvement of the processes which produce goods and deliver services. Managing operations is vital to every type of organization, for it is only through effective and efficient utilization of resources that an organization can be successful in the long run. This is especially true of healthcare organizations, which generally in the United States are excessively costly, particularly compared with their outcomes. Even nations with more successful healthcare systems, however, can still benefit from improved operations management, particularly with respect to patient safety and adverse events.

This course is a core class for the “Business of Healthcare” certificate program. However, it has broad application to other areas of study. For example, it can substitute for OM 335/OM 235 as a prerequisite for the supply chain management courses in the McCombs School or for any major that requires that class. If you are in the McCombs Business Honors program, please consult with your instructor before taking this course about substituting it for OM 335H/OM 235H.

Prerequisites:

- ACC 310F, 311, or 311H
- Credit or registration for one of the following: STA 309, ECO 329, EDP 371, M 316, 358K, 309H, SDS 302, 304, 306, 328M or equivalent.

COURSE OBJECTIVES:

The main objectives of this course are:

- To provide you with an understanding of the crucial importance of operations management in the healthcare environment.
- To familiarize you with the basic concepts, techniques, methods and applications of operations management.
- To enhance your analytical skills and ability to uncover problems and opportunities for improvement in healthcare as well as other production and service processes.
- To prepare you for further study in operations management.

COURSE MATERIALS:

1. Required Readings

- Course Packet: Available from Harvard Business School Publishing. The link to the website will be on the Canvas announcements page.
- Textbook: “Operations Management for Dummies” by Anderson, Anderson, & Parker (**1st Edition, NOT 2nd Edition**). This is the textbook that we shall use for the class. It is available on Amazon.

2. Statistics background:

If you haven’t had AP statistics or a statistics class here at the University, you will need to review the videos listed on the Canvas Modules page

3. Course Website:

This course will use Canvas substantially. The login page is located at <http://canvas.utexas.edu>. A UT EID is required for accessing the web site. If you have problems using Canvas, you can call the ITS help desk at 475-9400. You will find the following on Canvas:

(a) Course Notes: Before each lecture, a pdf version of the slides will be posted under “Modules”. Most of the time, these slides will be incomplete and you will be expected to fill in the blanks in class. Partially completed slides will be posted on Canvas within 24 hours of class.

(b) Assignments and Solutions: The purpose of homework assignments is to provide learning reinforcement and promote class preparedness. You will find that the homework provides excellent learning feedback and is a confidence-building tool. The assignments will also help you prepare for the exams. They will be under Canvas under “assignments”.

(c) Practice exams: Practice exams and sample problems are posted on canvas under “modules.”

(d) Grades: Grades on exams and assignments will be posted on Canvas. Please check that the grade posted matches the grade on your paper copy and notify the instructor (for exams) or the TAs (for assignments) as soon as possible in case of a discrepancy. **WARNING: THE OVERALL SEMESTER GRADES FOR CANVAS WILL NOT REFLECT YOUR GRADE IN CLASS.**

PERFORMANCE EVALUATION:

Your grade will be assessed through homework assignments, exams and class participation. Below is a description of how the various types of assignments and tests contribute to your grade, as well as a description of each type of graded work.

Component	Grade
Midterm Exam	30%
Final Exam	40%
Homework assignments	20%
Class Participation	10%
Total	100%

Extra credit work will not be given under any circumstance.

Exams

While all exams will necessarily build on all the material in the class up to that point, each exam concentrate upon the material taught during that section of the class.

Exams may contain true/false, multiple choice, short answer, essay, or analytical problem-solving questions. The exams are **closed book and closed notes**. Do remember to bring two (2) calculators as well as at least two (2) pencils and a pen for writing short answers and essays. A formula sheet of your own preparation may be used during the exam.

Offering a make-up exam for a missed exam is entirely at the discretion of the instructor. Students with legitimate reasons and letters of proof can request to take make-up exams.

A solution set will be made available after the graded exams are returned. Students must read this file before coming to the instructor to discuss their grade. Any concern regarding the grading of exams should be addressed **IN WRITING** directly to the instructor, no later than **one week** after the graded exam was returned in class.

Homework Assignments

There are approximately a dozen homework assignments throughout the semester. All will be uploaded to Canvas. If Canvas is not functioning for some reason, email the assignment to both the TA and myself.

You may work on the homework assignments with your fellow students, but in the end, each student must hand in his or her own individual work. Handwritten assignments are fine (and even recommended for math assignments). If you do, however, please use a scanner rather than a smartphone as smartphones' poor resolution will make it difficult for the graders.

Homework assignments have to be turned in in class at the beginning of the class session listed on the schedule. The solutions to the homework will be provided within a business day of when it is due; therefore, no late homework assignments will be accepted. The lowest homework grade will be dropped when computing your overall homework grade at the end of the semester. However, you are responsible for the material on **all** homework assignments.

Homework assignments will be graded by the TAs on a scale of 0 to 2 for each question. At the end of the semester, each homework will be turned into a percentage prior to averaging to determine the semester homework grade. For example, 22 out of a maximum of 24 points for a homework will be translated into a 91.6% prior to averaging. Points will be given for effort (especially for the case-based assignments) and presentation. Any concern regarding the grading of homework assignments should be addressed directly to the TA and not to the

instructor, no later than one week after the graded assignment was returned in class. Do remember to check the solution sets because a high grade does not mean that the problems were completed correctly.

Class Participation

While regular attendance is expected, attendance will not be formally taken. Hence, you need not inform me if you are unable to attend because of illness, MCAT's, interviews etc. That said, you are responsible for all work covered during any classes you miss.

Students are expected to prepare before class when a case is to be discussed. Participation in class, in the form of answering questions and/or commenting on the material is strongly encouraged.

After each session, students will be asked to fill out a class participation survey. Students who participated in class (by making a substantive question or comment that the instructor has recognized) are asked to answer yes, the others do not need to fill out the survey.

Students are expected to behave with the courtesy and decorum expected of students at the University of Texas. **Students may not disturb classmates, surf the web, read newspapers or use their cell phones in class. Nor shall they be impolite to other students or the instructor.** Doing so will result in a deduction for course participation.

Guest Speakers

We will also have (tentatively) 2-4 guest speakers who are process improvement experts this semester. Depending on when they are available, the syllabus timing (including homeworks and midterms) might have to be readjusted.

INCLUSIVENESS

Healthcare has traditionally been characterized by large gender imbalances by profession and specialty. I will endeavor to try to actively reverse this by examples in class. I will also discuss some of these imbalances, particularly in the current healthcare operations trends section at the beginning of class.

With respect to pronouns, I will typically use singular "they" rather than "he" or "she" during discussions when possible. Some may argue against the grammar inherent in this solution. However, if "they" was good enough for Shakespeare (see e.g. *Comedy of Errors*, Act IV, Scene 3), it is good enough for me.

It is my intent that students from all diverse backgrounds and perspectives will be well served by this course, that students' learning needs will be addressed and that the diversity that students bring to this class can be comfortably expressed and be viewed as a resource, strength and benefit. Please let me know right away if this ever is not the case. Also, provide advice for process improvement, so that I can better the classroom experience for all students.

STUDENTS WITH SPECIAL NEEDS

Students with disabilities may request appropriate academic accommodations from the Division of Diversity and Community Engagement, Services for Students with Disabilities, 512-471-6259, <http://diversity.utexas.edu/disability/>.

RELIGIOUS HOLY DAYS

By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.

SCHOLASTIC DISHONESTY

The McCombs School of Business has no tolerance for acts of scholastic dishonesty. The responsibilities of both students and faculty with regard to scholastic dishonesty are described in detail in the BBA Program's Statement on Scholastic Dishonesty at <http://my.mcombs.utexas.edu/BBA/Code-of-Ethics>. By teaching this course, I have agreed to observe all faculty responsibilities described there. By enrolling in this class, you have agreed to observe all student responsibilities described there. If the application of the Statement on Scholastic Dishonesty to this class or its assignments is unclear in any way, it is your responsibility to ask me for clarification. Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from the University. Since dishonesty harms the individual, all students, the integrity of the University, and the value of our academic brand, policies on scholastic dishonesty will be strictly enforced. You should refer to the Student Conduct and Academic Integrity website at <http://deanofstudents.utexas.edu/conduct/> to access the official University policies and procedures on scholastic dishonesty as well as further elaboration on what constitutes scholastic dishonesty.

CAMPUS SAFETY

Please note the following key recommendations regarding emergency evacuation, provided by the Office of Campus Safety and Security, 512-471-5767, More info at: <https://preparedness.utexas.edu/>.

- Occupants of buildings on The University of Texas at Austin campus are required to evacuate buildings and assemble outside when a fire alarm is activated.
- Familiarize yourself with all exit doors of each classroom and building you may occupy.
- If you need evacuation assistance, inform the instructor in writing asap.
- In the event of an evacuation, follow the instruction of faculty or class instructors.
- Do not re-enter a building unless given instructions by Austin or UT police or fire authorities.
- Behavior Concerns Advice Line (BCAL): 512-232-5050 or [on-line](#).
- In case of emergency, further information will be available at: <http://www.utexas.edu/emergency>.

RECRUITING POLICIES

Conflicts occasionally arise between classes and the search for employment or admission to graduate school. We understand how important these search processes are to you, and UT provides many resources in support of them. However, UT is first and foremost an educational institution and your bachelor's degree will be the credential that certifies your education. As such, your current, bachelor's education will take precedent whenever such a conflict arises.

All organizations that recruit on Campus are informed of this fact. Should a conflict arise, we recommend the following steps:

- Check the syllabus to see if an exception is provided that would allow you to satisfy class obligations while still attending the recruiting event (e.g., paper instead of quiz, allowed quiz drops, etc).
- Note that a job-related (whether a current job or a potential one) or a conflict regarding admissions to a graduate school program is usually not an acceptable reason for missing an exam or taking a make-up, and may not be acceptable in other circumstances either. If any doubt exists, check with your professor.
- If no exception is provided, inform the company/institution that an academic conflict exists and request an accommodation.
- If no accommodation is provided and you are a McCombs student, contact BBA Career Services and request their assistance in resolving the situation. For other students, please contact your career or other appropriate services office.

Note, with respect to recruiting, that while we do have influence with the companies that recruit at McCombs, not all conflicts can be resolved and we have little or no influence with companies that do not recruit through the Recruit McCombs system.

Finally, be aware that it is not unreasonable for an organization to expect you to go to some lengths to show your interest in them. In a recent example, several students completed an exam at 9 pm and were expected to attend an on-site interview in Houston the next morning at 8 am. A 5:30 am flight from Austin was available and the students were expected to be on it. This is reasonable, and if you think it is unfair, you probably need to reconsider what you believe are the reasonable expectations of a good job and career in the professional world.

COVID-19 AND CLASS MODALITY

Class Modality:

- Through January 28, Virtual via Zoom
- After January 29 Physically in class only (Zoom recordings will be available)
- **These dates and modalities may change based on University Direction**

Make sure that you are able to use Zoom from beginning of semester

1) Getting help with Zoom:

Students needing help with Zoom should can refer to the [McCombs Student Instructional Resources Wiki](#). All Canvas webpages for all McCombs courses will have a link to the McCombs Student Instructional Resource Wiki on the bottom left corner, so students can access it from their Canvas course pages.

2) Preferred method of joining a class or office hours in Zoom:

The preferred method of joining a class or office hours is through video on Canvas. Students must log into their Canvas course site and click on Zoom in the left toolbar to locate links to join the class in Zoom.

3) Discussion Threads: There will be a discussion thread for our classes going forwards. If you cannot make a comment or ask a question in class due to online discussion bandwidth being lower, please put them into the thread. Count these as part of your participation. In other words, if you put a comment/question on the discussion thread, that also counts for class participation. Given that we do not have name cards, we cannot employ the pre-spring break system for counting participation any more.

4) **Zoom etiquette:**

Because there will be so many people on these Zoom meetings, here are some best practices for making sure we are working together to create an efficient, effective, respectful, and ultimately enjoyable classroom!

- Mute yourself unless you are speaking. This will cut down on background noise and limit any distractions
- Be mindful of your surroundings when on camera. We want to make sure we avoid as much distraction as possible
- Please add a professional photo of yourself for your Zoom profile picture. This photo will be visible during class sessions
- Turn your camera off if you are leaving the meeting temporarily and use the away feedback icon
- Try to keep questions and comments brief. With a large classroom, there are many people to get through and many questions to move through. Try to limit remarks as much as possible
- Minimize repetition. If you are hearing repeat information, use the go faster icon.
- If the video or audio is choppy, try turning off your video.
- Please try to use the most reliable WIFI you can access.

5) **Class recording privacy:**

Class recordings are reserved only for students in this class for educational purposes. The recordings should not be shared outside the class in any form. Violation of this restriction could lead to Student Misconduct proceedings.

6) **Help from Student Emergency Services:**

Students who need help getting access to technology in order to do online instruction should fill out the [Student Emergency Services form](#). For general inquiries, please contact [Student Emergency Services](#).

SCHEDULE

The following is a tentative schedule of meetings, readings, and deliverables for the semester. This is subject to change. When there are major changes, you will be notified by email; a current schedule will always be available on the Canvas course website.

OM 334M Schedule					
AAP = Anderson, Anderson, and Parker Textbook, First Edition (not 2nd Edition)					
Session	Day	Date	Topics	Readings	HWs
1	Wed	Jan-19	Introduction: Operations Management & Healthcare		
2	Mon	Jan-24	Process: Flow diagrams & Vocabulary	AAP: Chaps. 1-2 <i>Vaccine Production Diagramming Exercise</i>	1
3	Wed	Jan-26	Process: Metrics	AAP: Ch. 3 <i>Physician's Game Exercise</i>	
4	Mon	Jan-31	Process: Scheduling & Bottlenecks	Case: "Kristen's Cookies"; AAP: Ch. 4	2
5	Wed	Feb-2	Process: Scheduling & Bottlenecks (cont.)	AAP: Ch. 5	
6	Mon	Feb-7	Process: Design Principles	<i>Allergy Clinic Design Exercise</i>	
7	Wed	Feb-9	Process: Design Principles (cont.)		
8	Mon	Feb-14	Process: Costing	<i>X-Ray Cost Structure Exercise</i>	3
9	Wed	Feb-16	Process: Costing (cont.)		
10	Mon	Feb-21	Process: Service Design Application	Case: Benihana "Note on the Use of Experience Curves" Discussion: application of rapid flowtime principles in Benihana Case to focused, standalone hospitals	4
11	Wed	Feb-23	Process: Healthcare Design Application	Case: Shouldice, Hospital "Note on the Use of Experience Curves"	5
12	Mon	Feb-28	Review session		
13	Wed	Mar-2	*** Midterm ***		
Special Friday Sess.	Fri	Mar-4	Jose Martinez, MD - FRIDAY Session (time TBD)**		
14	Mon	Mar-7	Supply Chain Risk: Supply Chain Management—Bullwhip effect†		6†
15	Wed	Mar-9	No class (in compensation for Friday Guest Speaker Lecture)		
		* Mar 14-20 *	Spring Break March 15-20		
16	Mon	Mar-21	Project Risk: Critical path method	AAP: Ch. 15	Mart* *
17	Wed	Mar-23	Project Risk: Managing uncertainty—PERT	<i>Vaccine Distribution Exercise</i>	
18	Mon	Mar-28	Guest Speaker (tent. Luci Leykum, MD)		7
19	Wed	Mar-30	Process Risk: Inventory Management	AAP: Ch 8., "Dealing with the Business of Inventory" and "Single-Period Review" Only <i>Hospital syringe usage example Exercise</i>	
20	Mon	Apr-4	Process Risk: Waiting time management	<i>Urgent Care Clinic Exercise</i>	
21	Wed	Apr-6	Process Risk: Waiting Time Mgt (cont)	AAP: Ch. 7 "Considering Capacity" and "Addressing Wait Time for Services" only	8
22	Mon	Apr-11	Patient satisfaction & IT-driven process improvement	2 Cases: Cleveland Clinic: Patient Experience & IT at Beth Israel - Deaconess	9
23	Wed	Apr-13	Process Improvement: Quality Targets	"Fixing Healthcare on the Front lines" AAP: Ch. 12 <i>Radiology Lab Exercise</i>	10
24	Mon	Apr-18	Process Improvement: 6-Sigma Quality Tools I	Case: Six Sigma at Academic Medical Hospital "Fixing Healthcare on the Front lines" <i>Medicine Compliance Visual Mgt. Exercise</i>	11
25	Wed	Apr-20	TBD		
26	Mon	Apr-25	Process Improvement: 6-Sigma Quality Tools II	AAP: Ch.13 <i>Pharmacy Errors Example</i>	
27	Wed	Apr-27	Process Improvement: Lean Production System in a Healthcare Context at Virginia Mason Hospital	Case: Virginia Mason "Decoding the DNA of the Toyota Prdn. System" AAP: Ch. 11	12
28	Mon	May-2	Guest Speaker (tent. Neal Wendt)		

29	Wed	May-4	Review Session		
Final	***	TBD	Final		

*Required class, which will be held on a Friday

†Bullwhip homework is undroppable

** Martinez Homework is required and undroppable. Date due will depend on Dr. Martinez's lecture