
Service Operations Management (OTM 751)

Fall 2023

Professor Bob Batt

5287 Grainger Hall

bob.batt@wisc.edu

608-890-2575

Office Hours: Wednesday, 3:30-5:00pm & by appointment

Course Details

- Meeting Time
 - 2:30-3:45, Tuesday/Thursday, Grainger 3070
- Modality
 - In-person
- Credits: 3
 - The course generally meets in-person for two 75 minute sessions each week.
 - A few sessions may be asynchronous with instructional materials, self-paced homework, and optional help sessions.
 - It is expected that that students will work on course learning activities (reading, writing, problem sets, studying, etc.) for about an average of 3 hours out of the classroom for every class period.
- Official Description: Application of operations management principles to the analysis of service-delivery systems in profit and nonprofit organizations. Topics include designing service-delivery systems, location and layout, operations planning and control, yield management, technology and information systems, and service quality management.
- Requisites: OTM 700
- Designation/attributes: no specific designations apply

Overview

In the United States, the service sector represents approximately 80% of both GDP and employment. In addition to the "pure" service sector (restaurants, airlines, banks, etc.), many manufacturing firms are becoming increasingly service oriented as they seek to gain a competitive edge. Elements common to most services make the management of their operations quite complex. In particular, services are often intangible, not storable or transportable, and often highly variable. Frequently, their delivery involves a significant amount of customer contact. All of these factors make service operations end up looking quite a bit different than manufacturing operations, and thus the task of achieving excellence in them requires particular strategies and analysis methods. In this class we will learn both quantitative tools and qualitative frameworks that will help us manage

such complex environments to achieve timely, high-quality, profitable services.

The course examines settings such as healthcare, retail, transportation, food service, and hospitality/entertainment, among others. Class time will be devoted to a combination of case studies, in-class exercises, and discussions of readings. The course is intended for students interested in general management, with a specific focus on managing operations and quality in non-manufacturing organizations.

Learning Objectives

- Students will utilize qualitative frameworks and quantitative tools to explain the tradeoffs involved in achieving timely, high-quality, profitable service operations.
- Students will understand the function and importance of each element that needs to be defined in the design of a service (Service Design Framework).
 - Service Act, Strategic Priorities, Delivery System, Funding Mechanism
- Students will evaluate service strategies and delivery systems in real companies utilizing the service design framework.
 - Students will identify the service strategy being applied.
 - Students will explain how various facets of the service delivery system support or weaken this strategy
- Students will understand how to manage variability and uncertainty in delivery systems through appropriate capacity planning, queue design, and revenue management.

Assignments & Grading

Course grades will be based on student performance on the following items:

Task	Grade Weight
Class Preparation Questions/Assignments	10%
Attendance	10%
Class Participation	10%
Service Experience Postings	5%
Observe-a-Service Report	5%
Paramount Case Analysis Deck	5%
Customer Feedback Analysis Deck	5%
Midterm Exam	25%
Group Project	25%
TOTAL	100%

Final letter grades will be determined relative to the overall performance of the class (i.e., on a curve).

Class Preparation Questions/Assignments

For most days of class there will be some form of pre-class assignment, such as case study questions or quantitative exercises. Answers will be submitted online via Canvas. Most of this pre-class work will be graded for submission rather than correctness. In other words, any submission

showing that reasonable effort was made to complete the assignment will receive full credit. The exact number of points per assignment will be displayed in Canvas.

While students are encouraged to work together to prepare for class, the pre-class assignments are to be submitted individually. In the spirit of academic integrity and transparency, students are required to provide the names of all students with whom the preparation questions were discussed.

Attendance

Students are expected to attend all classes, and attendance will be taken each day. However, if attending class is not possible, the best option for making up for a missed class is to attend the other section the same day (11am, 1pm), but this must be approved by the professor ahead of time.

If class is missed for any reason, the student may receive attendance credit by submitting a 1-2 page class summary document of the missed class to the professor before the start of the next class. This document should be based on reviewing class notes/slides, the class audio recording, and/or discussion with classmates. A summary document showing a thorough understanding of the missed material will receive full attendance credit.

If a serious personal conflict arises (religious observance, serious illness, death in the family, etc.) that requires missing multiple classes or prevents the student from submitting a timely class summary report, please notify the professor as soon as possible so that accommodations can be made.

Class Participation

Being an active participant in class discussion and activities is crucial for learning both for oneself and for the good of the other students in the class. This, of course, requires being present, being prepared for class, answering questions well when called upon, and proactively engaging in class discussions. The professor will keep a record of strong participants after each class session. One need not be a leading participant in every session to receive full class participation credit.

Service Experience Postings

As consumers, we all interact with service companies every day, for example, the University, an Uber driver, a restaurant, etc. To encourage us all to pay attention to these service experiences *and to connect them with course topics*, each student is required to post on the course website a service experience or insight 5 times during the semester (roughly every 3 weeks). These are due at 11:59pm on the dates noted in Canvas. The posting should either:

- Describe and comment on a service experience the student had (good or bad)
- Comment on a relevant article seen in the press (magazines, newspapers, websites, etc.)

If possible, please include photos and/or weblinks. In order to keep this from becoming a list of rants about bad service, please only post one “bad experience” for every one neutral or positive posting. Students are also encouraged to comment on one another’s postings. Postings will be graded on a 5-point scale based on to what extent the post translates the service experience into an interesting insight or connection to class topics.

Observe-a-Service Report

The purpose of this assignment is to get students “out in the wild” and observing a service in detail

and thinking about “what are the decisions and trade-offs that service managers face?” The assignment involves observing a service for at least an hour, preparing a 3-6 page written report, and discussing the observations in class (not a formal presentation). Specifics of this assignment will be provided in class and on Canvas. This is a group assignment.

Paramount Case Analysis Deck

This assignment involves analyzing the queueing situation in the Breakfast at the Paramount case. Details will be provided in class and on Canvas. This may be done individually or as a group.

Customer Feedback Analysis Deck

This assignment involves analyzing the customer feedback letters and data collected from the class. Details will be provided in class and on Canvas. This may be done individually or as a group.

Midterm Exam

The midterm exam will be taken in class during normal class time on November 2. Practice problems and more details regarding the exam content and format will be provided closer to the time of the exams. Please let the professor know within the first two weeks of class if you have a serious conflict with the exam date.

Group Project

Students will work in a group to either study the service operations of a company of their choosing, or to design a new service company. The purpose of this assignment is to apply the concepts and tools learned in class to a real-life company. The deliverables include a written report and a presentation to the class at the end of the semester. Specifics of this assignment will be provided in class and made available on Canvas.

Course Materials

Website

The UW-Madison Canvas website will be the official website for the class. Please check it regularly for up-to-date information about assignments, announcements, readings, grades, surveys, etc. Please consider Canvas to be more authoritative than this syllabus regarding assignments and due dates.

Readings

This course uses a required coursepack available from Harvard Business School Publishing (~\$68). Please see the course Canvas page for the link to the HBSP coursepack. (Using readings purchased by another student is a violation of copyright law.) Additional required readings will be distributed in class or on the course website.

Beyond these readings, a good reference textbook is “Matching Supply with Demand: An Introduction to Operations Management” by Cachon & Terwiesch (5th edition), but this is not required. It is available on reserve from the library. Key sections include Ch. 9 on Queueing, Ch. 8 on Lean Operations, and Ch. 18 on Revenue Management.

Software

This course makes use of the queuing simulation software ExtendSim. There are multiple options for accessing the software, including installing it on the student's own computer or using it on an Azure virtual machine. Instructions for installing/accessing ExtendSim will be available on Canvas. Thanks to an educational grant from ImagineThat Inc., makers of ExtendSim, the software is free for the use of OTM 751 students.

This course will (likely) make use of Top Hat software for real-time polling and for recording class attendance. Students will need to establish a Top Hat account. Top Hat is used under a UW-Madison campus license, and there is no student charge.

Course Policies

Academic Integrity

Academic integrity is a crucial element of all classes at UW-Madison. Students are expected to abide by the school's honor code

(https://canvas.wisc.edu/courses/38720/files/21066622/download?download_frd=1). Any violation will be taken very seriously and will be handled according to university policies

(<https://conduct.students.wisc.edu/academic-misconduct/>). The minimum penalty for academic misconduct is a zero on the relevant assignment. If you are ever in doubt about any issues regarding academic integrity (group work, sources referenced, etc.), please speak with the professor.

Artificial Intelligence Tools

The advent of artificial intelligence (AI) tools and applications (such as ChatGPT, DALL-E, etc.) creates challenges for defining what is and is not acceptable use of such tools for class.

Conceptually, the rule for AI tools in this course is that they may not be used for tasks that require thought, mental analysis, and critical thinking. For example, AI tools may not be used to answer text-based class preparation questions (e.g., "What do you think are the strategic priorities of Zappos?", "Provide two examples of companies that face high arrival variability."). However, it is acceptable to use AI tools to help with "mechanical" tasks such as creating a graph, performing a calculation, or as a replacement for a normal web-search (i.e., Google).

AI tools will not be permitted at all for the midterm exam.

Any use of these tools other than where indicated is a violation of this course's expectations and will be addressed through UW-Madison's [academic misconduct policy](#), specifically UWS 14.03(1)b (b) Uses unauthorized materials or fabricated data in any academic exercise

Electronic Proctoring of Exams

The professor reserves the right to use Honorlock, the campus-supported electronic proctoring tool, to proctor any exam, even when the assessments are done in person. Being willing to use Honorlock is a condition of enrollment in this course. Failure to use Honorlock as directed will result in a zero on the exam. A practice opportunity will be given for students to try out and get used to the Honorlock system prior to use for a real assessment.

Personal Electronics in the Classroom

Personal electronics are allowed in the classroom as long as they are used *exclusively* for class-related work (note taking, viewing files, related spreadsheets, etc.) and not used in a way that is distracting to the other students in the class. Phones, while not prohibited, are likely not useful for class-related purposes, and thus should largely be out of sight and should always be silenced. The professor reserves the right to change this policy at any point if the use of electronics becomes detrimental to the class.

Other Policy Statements

The University of Wisconsin-Madison has several other official statements of course policies. These all apply to this course and can be accessed at <https://guide.wisc.edu/courses/#SyllabusTLData>.

The policies include (electronic version of this document includes weblinks):

- [Academic Calendar & Religious Observances](#)
- [Academic Integrity Statement](#)
- [Accommodations for Students with Disabilities](#)
- [Course Evaluations](#)
- [Diversity & Inclusion Statement](#)
- [Mental Health and Well-Being Statement](#)
- [Privacy of Student Records & the Use of Audio Recorded Lectures Statement](#)
- [Students' Rules, Rights & Responsibilities](#)
- [Teaching & Learning Data Transparency Statement](#)

Schedule

Please check Canvas regularly for additional details and changes. Canvas should be considered the authoritative source of information, and this page is just for convenience.

Week	Day	Date	T/Th	Topic	Read for Class	Do for Class	Other Deliverables
1	1	9/7	Th	Welcome & What's a Service?	-	-	
2	2	9/12	Tu	Service Design Framework	"The Four Things a Service Business Must Get Right" (cp)	Pre-class survey	
	3	9/14	Th	Service Design: It's all about process!	Shouldice Hospital Case (cp)	Pre-class survey	Service Experience 1
3	4	9/19	Tu	Service Design: It's all about people!	Zappos Case (cp)	Pre-class survey	
	5	9/21	Th	NO CLASS: Observe a Service	-	-	
4	6	9/26	Tu	Service Observation Discussion & Managing Variability	"Breaking the Trade-off..." (cp)	Pre-class survey	
	7	9/28	Th	Guest Speaker: Daron Jones	See Canvas	Observe-a-Service Report	
5	8	10/3	Tu	ED Game	ED Game Instructions	See Canvas	
	9	10/5	Th	ED Game Debrief	See Canvas	Pre-class survey	Service Experience 2
6	10	10/10	Tu	Intro to Queuing: The Carwash	"The Waiting Game" (cp)		
				Intro to Queuing: The Carwash	Skim "The Psychology of Waiting Lines" (canvas)		
	11	10/12	Th	Queuing: Intro to ExtendSim		"Intro to ExtendSim" Video	Customer Feedback Letter
				Queuing: Intro to ExtendSim		Pre-class survey	
7	12	10/17	Tu	Queuing: Pooling & Priorities (ASYNCHRONOUS)	Bob the Barber Case (canvas)	BitB Day 1 Assignment	
				Queuing: Pooling & Priorities			
	13	10/19	Th	Queuing: Pooling & Priorities	Bob the Barber Case (canvas)	BitB Day 2 Assignment	
8	14	10/24	Tu	Queuing: Bottlenecks & Balking	Breakfast at the Paramount (cp)	Paramount Day 1 Assignment	
	15	10/26	Th	Queuing: Sequencing	Breakfast at the Paramount (cp)	Pre-class survey	Service Experience 3
				Queuing: Sequencing		Paramount Analysis Deck	
9	16	10/31	Tu	ED Game: Simulation	See Canvas	See Canvas	
	17	11/2	Th	2/3-term Exam (in class)	-	-	
10	18	11/7	Tu	Quality: Lean Healthcare	"Lean Knowledge Work" (cp)	Pre-class survey	Customer Feedback
				Quality: Lean Healthcare	Virginia Mason Medical Center (cp)		Response & Survey
	19	11/9	Th	Quality: Art or Science?	"When should a process be art, not science?" (cp)	Pre-class survey	
				Quality: Art or Science?	Ritz-Carlton case (cp)		
11	20	11/14	Tu	Quality: Keeping the Customer Happy	"Stop Trying to Delight..." (cp)	Pre-class survey	
				Quality: Keeping the Customer Happy		Customer Feedback Analysis Deck	
				Quality: Keeping the Customer Happy			
	21	11/16	Th	Customers as Co-creators	Uber: Changing the Way the World Moves (cp)	Pre-class survey	Service Experience 4
				Customers as Co-creators	Zipcar: Influencing Customer Behavior (cp)		
12	22	11/21	Tu	Service Innovation	Innovation at Uber: Express Pool (cp)	Pre-class survey	
				Service Innovation			
	-	11/23	Th	THANKSGIVING			
13	23	11/28	Tu	Guest Speaker: TBD	See Canvas	See Canvas	
				Guest Speaker: TBD			
24	11/30	Th		Revenue Management Game	Revenue Management articles (canvas)		
14	25	12/5	Tu	Rev. Mgt. Game Debrief		Pre-class survey	
	26	12/7	Th	B2B Services	The Compass Group (cp)	Pre-class survey	Service Experience 5
				B2B Services			
15	27	12/12	Tu	Group Project Presentations	2:30-4:30pm		