

Service Operations Management (OTM 751)

Fall 2019



Professor Bob Batt

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Office Hours: Wednesdays, 2:30-4:00pm & by appointment

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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 intangible, not storable or transportable, and often highly variable. Frequently, their delivery involves a significant amount of customer contact. For example, Disney World can only provide a ride on Space Mountain to a customer that comes to the park, and Disney can not "store up" idle capacity on its rides in the off-season to satisfy demand during Spring Break. 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 covers the following topics:

- Service System Design
 - Service design framework
 - Managing customers as co-creators
 - Quality management
- Managing Variability & Uncertainty
 - Queuing systems
 - Revenue/yield management

The course examines settings in healthcare, retail, transportation, customer service, and hospitality/entertainment, among others. Class time will be devoted to a combination of case studies, in-class exercises, guest speakers, and a few lectures. 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.

Course Details

- Credits: 3
 - The course meets in-person for 150 minutes each week.
- Grainger Hall 2335
 - Tuesday/Thursday 2:30pm-3:45pm
- Requisites: OTM 700 or permission
- Designation/attributes: no specific designations apply

Assignments & Grading

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

Task	Grade Weight
Class Preparation Questions	15%
Class Participation	10%
Service Encounter Postings	5%
Service Observation Report	5%
Customer Letter	5%
Case Writeup	10%
In-class Quizzes	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

For most days of class there will be a series of preparation questions posted on Canvas. Answers will be submitted online via Canvas. All 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.

While students are encouraged to work in groups to prepare for cases, the questions 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.

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. Poor or distracting participation will also be noted.

Service Encounter 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 encounters, each student is required to post on the course website at least one service experience or insight every two weeks (due Saturdays at 11:59pm). The posting should either:

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

Postings should include some reference or connection to topics discussed in class. If possible, please include photos and/or weblinks. In order to keep this from becoming a list of rants about bad service, students may only post one “bad experience” encounter for every one neutral or positive posting. Students are also encouraged to comment on one another’s postings.

Service Observation 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 3-5 page written report, and discussing the observations in class (not a formal presentation). Specifics of this assignment will be provided in class and made available on Canvas.

Customer Letter

Each student will write a detailed customer feedback letter (positive or negative) to a company. Both the letter and any response from the company will be collected via Canvas, shared with the class, and discussed. The purpose of this assignment is to observe the different ways that companies handle and respond to customer feedback. Specifics of this assignment will be provided in class and made available on Canvas.

Case Write-up

Select one of the following cases and submit full written answers (PDF) for all of the case preparation questions: Zappos.com, Virginia Mason Medical Center, Ritz-Carlton, Ebay/Amazon/Zipcar, Uber, Compass Group. (Please also still submit answers through the regular Canvas pre-class survey). Students may collaborate/discuss the questions with other students, but the written answers must be the student's own and must be submitted individually. Please provide the names of any students with which you collaborated. The write-up is due before the start of the class in which the case will be discussed.

In-class Quizzes

There will be four brief, in-class quizzes. Quiz dates are indicated on the schedule at the end of this syllabus.

Group Project

Students will work in a group to study the service operations of a company of their choosing. The purpose of this assignment is to apply the concepts and tools learned in class to a real-life company. The deliverables include a full 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

Readings

This course uses a *required* coursepack available from Harvard Business School Publishing. Please see the course Canvas page for the link to the HBSP coursepack. 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, but this is not required. It is available on reserve in the Grainger library. Relevant pages are indicated on the schedule at the end of the syllabus.

Software

This course *requires* the use of two simulation software packages which students must install on their own computers: ExtendSim and @Risk. Instructions for installing these packages are available on Canvas. ExtendSim is a discrete event simulation package that will be used to simulate queues. The student cost is \$25. @Risk is a Microsoft Excel add-in used for Monte Carlo simulation. It is free for WSoB students. Note that both packages are only available for Windows OS. If you have a Mac, you will need to install BootCamp or Parallels and Windows. Please contact the DoIT Help Desk for assistance. Also note that the software is available on all WSoB public computers.

Course Policies

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.

Attendance

Students are expected to attend all classes. Missing class on the day of a quiz will result in a score of zero for that quiz. If a serious conflict arises (religious observance, serious illness, death in the family, etc.), please notify the professor as soon as possible so that accommodations can be made. Note that conflicts related to such things as recruiting, clubs, sports, etc. are not considered “serious conflicts” and will not be accommodated. Students are responsible for obtaining any notes or handouts for missed classes regardless of the reason for missing the class.

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://bus.wisc.edu/current-student-resources/ethics-honor-code>). Any violation will be taken very seriously and will be handled according to school policies (<https://conduct.students.wisc.edu/academic-integrity/>). 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.

Accommodation for Disabilities

The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility. Students are expected to inform the professor of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. The professor will work either directly with the student or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA.

Diversity & Inclusion

Institutional statement on diversity: “Diversity is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals.

The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world.”

Office Hours

Office hours are noted on the first page of the syllabus. However, students are also welcome to schedule a meeting or drop by. If the door is open, I’m probably free to talk.

Schedule

#	Date	Day	Topic	Case	Readings
1	9/5	Th	Welcome & Intro		
2	9/10	Tu	Service Design Framework		"Four Things..." by F. Frei
3	9/12	Th	NO CLASS: Observe a Service		
4	9/17	Tu	Service Observation Discussion & Managing Variability	Report due by 8am	"Breaking the trade-off..." by F. Frei
5	9/19	Th	Service Design: It's all about process!	Shouldice Hospital	
6	9/24	Tu	Service Design: It's all about people!	Zappos	
7	9/26	Th	QUIZ 1 & Queuing: Intro		Read: "The Waiting Game" Skim: "Psychology of Waiting Lines" (Canvas) (Optional C&T Ch. 9)"
8	10/1	Tu	Queuing: Intro to ExtendSim		
9	10/3	Th	Queuing: Pooling & Priorities	Bob the Barber (Day 1)	Case is on Canvas
10	10/8	Tu	Queuing: Pooling & Priorities	Bob the Barber (Day 2)	
11	10/10	Th	Queuing: Routing	Delwarca (Day 1)	
12	10/15	Tu	Queuing: Staffing	Delwarca (Day 2)	
13	10/17	Th	QUIZ 2 & Customer Letter Discussion		Review Customer Letters & Responses (Canvas)
14	10/22	Tu	NO CLASS		
15	10/24	Th	TPS & Lean in Services	Virginia Mason	"Lean Knowledge Work" (Optional: C&T Ch. 8)
16	10/29	Tu	Art or Science?	Ritz-Carlton	"When should a process be art, not science?"
17	10/31	Th	Customers as Operators	Ebay, Amazon, & Zipcar	
18	11/5	Tu	Quality in the Sharing Economy	Uber	"Stop Trying to Delight..."
19	11/7	Th	Guest Speaker: Allison Leichter		See Canvas
20	11/12	Tu	Revenue Management: Game		
21	11/14	Th	QUIZ 3 & Revenue Management: Intro		"Broadway Tickets..." (Canvas) (Optional: C&T Ch. 18)
22	11/19	Tu	Rev. Mgt.: Monte Carlo Simulation		(Optional: Intro to Yield Management (Canvas))
23	11/21	Th	Rev. Mgt.: Monte Carlo Simulation		
24	11/26	Tu	Revenue Management	BadgerAir (canvas)	Read: "Airline Pricing Secrets" (Canvas)
25	12/3	Tu	Revenue Management	BadgerAir (canvas)	
26	12/5	Th	B2B Services	The Compass Group	
27	12/10	Tu	QUIZ 4 & Course Wrap-up		Please bring a computer/tablet
			Project Presentations:	Time/Date: TBD	

Notes:

- Most readings and cases are found in the coursepack
- Some readings will be made available on Canvas
- The "C&T" readings are from the Cachon & Terwiesch 4th ed. textbook and are optional
 - o (In the 3rd ed. textbook the relevant chapters are: Queueing, Ch. 8, Lean/TPS, Ch. 11, Revenue Management, Ch. 16)