

Service Operations Management (OTM 751)

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Office Hours: Tuesday, 1:00-2:30pm & by appointment

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:

- Designing a Service System
 - Service design framework
 - Designing for quality
 - Designing for customers
 - Designing for employees
- Managing Variability & Uncertainty
 - Queuing systems
 - Revenue/yield management

The course examines settings in healthcare, financial services, retail, transportation, 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.

Assignments & Grading

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

Task	Grade Weight
Case Prep Questions & Homework	15%
Service Observation Report	5%
Service Encounter Postings	10%
Class Participation	10%
In-class Quizzes	15%
Group Project	20%
Final	25%
TOTAL	100%

Case Preparation Questions & Homework

This course makes extensive use of case studies. For each case there will be a series of preparation questions that will either be turned in in class or online (specific directions will be provided in class). Some classes will have a homework assignment other than case prep questions. 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 case and preparation questions were discussed.

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 trade-offs and decisions that service managers face?” The assignment involves observing a service for at least an hour, preparing a 2-5 page written report, and discussing the observations in class (not a formal presentation). Specifics of this assignment will be provided in class.

Service Encounter Postings

As consumers, we all interact with service companies every day, for example, the University, a taxi 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. 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.

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, or absence from class will also be noted.

In-class Semi-Pop Quizzes

There will be three brief (~15 minute) in-class quizzes that will be used as concept checks. Quizzes will be announced one class session before the quiz is given.

Group Project

Students will perform an in-depth analysis of a service of their choosing (approved by the professor) in which they will identify the service strategy and how various facets of the service delivery system support or undermine this strategy. This will be done as a group project. The deliverables include a written report and an in-class presentation at the end of the semester. More information will be provided in class.

Final Exam

There will be a cumulative final exam at the end of the semester. Review for the final will be covered in the last session of the course. More details regarding the exam content and format will be provided in class.

Course Materials

Readings

This course uses a required coursepack available from Harvard Business School Press. Please see the course Moodle page for the link to the HBSP coursepack. The course will also make use of a textbook that is still in development. The required chapters will be distributed in class. The publisher is giving us this text for free in return for our feedback. Additional readings will be distributed in class or on the course website.

Beyond these, a good reference textbook is “Matching Supply with Demand: An Introduction to Operations Management” by Cachon & Terwiesch (3rd edition), but this is not required.

Software

This course will make use of two simulation software packages. The monte-carlo simulation package @Risk is a Microsoft Excel add-in that is installed on all WSoB public and lab computers and may be installed for free on student computers. However, the software is Windows-based only. Thus, pure Mac users will need to plan to use the lab computers for these assignments.

Similarly, the discrete-event simulation package ExtendSim is available on WSoB public and lab computers. A student version can be purchased from the software company for \$25 for installation

on your own computer. This software is available for Windows and some versions of Mac OS.

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. However, if that is not possible, the best option for making up for a missed class is to attend one of the other sections the same day, but this must be approved by the professor ahead of time. Missing a class will forfeit the opportunity to earn class participation points that day. 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 (<http://bus.wisc.edu/about-us/commitment-to-ethics/honor-code>). Any violation will be taken very seriously and will be handled according to school policies (<http://students.wisc.edu/doso/acadintegrity.html>). If you are ever in doubt about any issues regarding academic integrity (group work, sources referenced, etc.), please speak with the professor.

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.

Accommodation for Disabilities

Please contact the professor in the first two weeks of the semester if you have a documented need for accommodation to obtain equal access to this course or to any assignment in the course. Every effort will be made to maintain confidentiality of any information you share with the instructor.

Schedule

#	Date	Day	Topic	Case	Readings
1	9/3	W	Welcome & Intro		
2	9/8	M	Service Design Framework		"Four Things..." by F. Frei, C&T: Ch. 1
3	9/10	W	Service Design It's all about process!	Shouldice Hospital	
4	9/15	M	Service Design It's all about people!	Zappos	
5	9/17	W	NO CLASS: Observe a service		
6	9/22	M	Service Observation Discussion	Report due by 8am	"Breaking the Trade-off..." by F. Frei
7	9/24	W	Matching Capacity & Demand		After Class: C&T: Ch. 2.1 & 2.2
8	9/29	M	Intro to Queuing		After Class: C&T: Ch. 13 (through 13.3)
9	10/1	W	Intro to ExtendSim		After Class: C&T Ch.13.4
10	10/6	M	Queuing: Priorities	The BAT Case	
11	10/8	W	Queuing: Batching	Benihana	
12	10/13	M	Queuing: Optimizing Staffing	Megacard	
13	10/15	W	Guest Speaker: Dr. Michael Brunner		See Moodle
14	10/20	M	Contemporary Queuing Research		"The Waiting Game" & see Moodle
15	10/22	W	Service Design: Designing for Employees	Commerce Bank	
16	10/27	M	Service Design: Customers as Operators	ebay & Zipcar	"5 minutes with Scott Griffith" (moodle)
17	10/29	W	Quality in Services		C&T Ch. 7, "Lean Knowledge Work"
18	11/3	M	Quality: TPS in Services	Virginia Mason	
19	11/5	W	Quality: Consistency	Ritz-Carlton	"Stop trying to delight..."
20	11/10	M	NO CLASS: Work on your projects		
21	11/12	W	Service Failure & Recovery	JetBlue: Valentine's Day	
22	11/17	M	Guest Speaker: Drew Madden	Attend 9:30 or 11:00 section. No 2:30 class	
23	11/19	W	Revenue Management Game		"Economic Scene: Raising the curtain..." (moodle)
24	11/24	M	Intro to Revenue Management		"Intro to Yield Management" (moodle)
25	11/26	W	Rev. Mgt. w/ Monte Carlo Simulation		
26	12/1	M	Revenue Management	BadgerAir (moodle)	
27	12/3	W	Buffer Day: TBD		
28	12/8	M	Project Presentations		
29	12/10	W	Course Wrap-up		Please bring a computer

Notes:

- Most readings and cases are found in the coursepack
- Some readings will be made available on moodle
- "C&T" indicates the Cachon & Terwiesch text that will be handed out in class.