Service Science
MGMT 150 / COGS 152
University of California, Merced
Fall 2016

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Tues 12:00-1:00 PM

Lecture Tuesday, 4:30 – 7:15 PM, COB2 130

URL https://catcourses.ucmerced.edu/courses/5342

Grading

Short Paper I	5 points
Short paper II	10 points
Short paper III	10 points
Short paper IV	10 points
Exam I	15 points
Exam II	15 points
Final Exam	25 points
Take-home Quizzes	10 points
Extra Credit	20 points

Assignments

Sept 6 **Service Experiences**. Two-page paper due: Describe **two specific service experiences** you've had, one that you think is good and one that you think is not-so-good. Describe how each service works and your interactions with each of them, and explain why you think one is better than the other.

Sept 27 **Service Complaints**. Two-page paper due: **Analyze a set of actual customer complaint letters**. Complaint letters for a specific industry (e.g., banking) or firm (e.g., American Airlines) can be downloaded from the customer feedback site www.complaints.com. A sample of at least 25 letters should be used. Read each carefully and classify the complaints along dimensions of service quality, such as reliability, responsiveness, assurance, empathy, tangibles, and so on. Also classify the types of solutions suggested in the letters, and perhaps suggest your own. Your paper should outline the complaints and suggested improvements, classifying and tallying types of complaints and improvements, and reporting the numbers (a graph may be helpful). Do not simply recite the complaints, but organize and classify them in some useful way that summarizes them.

Oct 25 **Service Design**. Two-page paper due: Create and describe **a service blueprint** for a service you've encountered. Consider both front-stage and back-stage processes to some extent. Describe the overall service, how each subprocess works, where the decision points are, how problems or errors may be handled, and so on. Provide a picture of your blueprint and a text description of it.

Nov 29 **Service Innovation**. Two-page paper due: Describe a new innovative service based on an existing service that you have experience with. Your description should focus on differences from the existing service and on how your suggestions make it better. Innovation in service results from systematic reconfiguration of the roles and responsibilities in a service system (see Normann & Ramirez, 1993). For example, take an existing offline service and identify modifications to enhance the service using interactive capabilities of online technologies, consider some ways in which service customers can take on more or less responsibility, or support your description with a blueprint. Many other approaches are possible.

Ground Rules and Other Useful Information

Being in Class

Attendance and participation are expected. So show up. Raise your hand. Get called on. You don't have to answer questions. You can ask them. Or you can take part in online polls and surveys. Just take part in the discussion somehow. Be an active part of the class. You'll learn more.

So when you're in class, be in class. If you have a laptop, use it to take notes or look up things related to the class or to the discussion, but please don't use it for any non-class activities. It's simple: Show up, pay attention, ask questions, participate.

Guest Speakers

We have lined up great guest speakers this term, including practitioners and professors. The guest speakers may not always be tightly related to the lecture topic of the day (scheduling is hard), but will always be relevant to service. These folks have gone out of their way and traveled to be here for you. So show up, be polite, and participate.

Readings

There are two required texts and many other readings, both required and optional (listed later in this document). All of the articles are accessible via the library (see CATCOURSES). To access these materials you will have to be connected to the campus network, either physically on campus of through the university's VPN software. Readings should be completed by the day they are listed on the syllabus.

Exams

There will be two exams in class during the semester, one on October 4 and the other on November 15. There will be a final exam held during final exam week on December 13 at 8AM in COB2 130. Each exam is worth 15 points and the final exam is worth 25 points. All questions will be multiple-choice, based on both required readings and lectures. Extra-credit questions will be based on optional readings. They will be closed-book exams.

Take-home Quizzes

During most class sessions, we will give out a *short assignment* for you to complete right after class, requiring only a few minutes of your time. This assignment will be relevant to the class session, and may require a short answer or a few sentences of response. It will be due by midnight the same day. Think of it kind of like a take-home quiz based on the class. If you don't come to class, you probably won't be able to complete it. Each will be worth 1 points, with a maximum of 10 points total.

Short Papers: Maximum length, 1000 words

There are four assignments. Each is a short, 1000-word essay. The first is worth 5 points: 1 point for turning it in on time, up to 2 points for reasonably clear and grammatical writing, and up to 2 points for coherent and appropriate content. The next three are worth 10 points: 2 points for turning it in on time, up to 4 points for reasonably clear and grammatical writing, and up to 4 points for coherent and appropriate content. All papers must be entered into the appropriate Assignment in CatCourses.

All papers must be clearly written and proofread so they contain no typos.

Extra Credit

In addition to extra credit available on the exams, and you can get extra credit by participating in experiments on campus (details will be posted on CatCourses). A total of 20 extra points will be available.

Turning in Work; Late or Missing Work

Papers must be turned in using the Assignments feature of CATCOURSES by 4:30 PM the day they are due. Short papers can be turned in up to a week late, but the maximum score for a late paper is 4 (first paper) or 8 points (rest of the papers). If you have a problem with any of this, contact Paul, Umesh, or Alex.

Cheating and Academic Honesty

Don't cheat. Don't copy off your friend's exam's in class, and don't copy your roommate's assignment from last year. We'll know. More importantly, you'll know. UC Merced has a formal policy on cheating: http://studentlife.ucmerced.edu/what-we-do/student-judicial-affairs/academicy-honesty-policy .

Disability Services

UC Merced is committed to ensuring equal academic opportunities and inclusion for students with disabilities (see http://disability.ucmerced.edu/). If you need any assistance, please contact Paul, Umesh, or Alex.

Office Hours and Contact

Paul's office hours are before class on Tuesday 3:30 – 4:30 PM in SSM 206A. To schedule an appointment at a different time, contact Paul by email at pmaglio@ucmerced.edu.

Umesh's scheduled office hours are TBD. For other times, contact Umesh at ukrishnamurthy@ucmerced.edu.

Alex's scheduled office hours are TBD. For other times, contact Alexandra at apabst@ucmerced.edu.

And please feel free to contact Paul, Umesh, or Alexandra with any type of issue or question you have about the class. **If you send email, please put *MGMT 150* or *COGS 152* in the subject line or else we may miss it**.

Course Outline: So what is service science?

The US economy – and economies of all industrialized nations – are made primarily of service jobs (more than 80% of jobs in the US are service jobs). So chances are that when you get out of school, you are going to be working in a service job or in the service sector.

Service science is the study of service, which can be broadly defined as actions that one takes on behalf of another (such as washing a car or managing web servers). There really is no such thing as service science today – there is no single accepted, integrated, interdisciplinary scientific study of the service economy or of service jobs. Service science is more like a movement whose goal is to focus attention on service-related problems. Service science is emerging. Its basic unit of analysis is the *service system*, made of configurations of people, technologies, and other resources that interact with other configurations to create mutual value. Many systems can be viewed as service systems, including families, cities, and companies.

More precisely, *service* is the application of resources (including competences, skills, and knowledge) to make changes that have value for another entity. For instance, in information technology (IT) outsourcing services, a service provider operates computing infrastructure for a service client. The provider augments the client's capabilities, taking on responsibility for monthly service-level agreements and year-over-year productivity improvements. The formal representation and modeling of service systems is nascent, largely because of the complexity of modeling people, their knowledge, activities, and intentions. Service system complexity is a function of the number and variety of people, technologies, and organizations linked in value-creation networks, such as professional reputation systems of a single kind of knowledge worker or profession, work systems composed of multiple types of knowledge workers, enterprise systems, industrial systems, national systems, and even the global service system. Knowledge workers depend on their knowledge, tools, and social-organizational networks to solve problems, be productive, continually develop, and generate and capture value. Service science must combine formal models with models of human behavior to understand service systems.

Course Learning Goals: What will you learn in this course?

In this course, you will learn about service. You will learn what service is, why it is different from other sectors and other jobs, and why it is important. You will learn about problems in service, such as measuring performance, increasing quality, and creating innovation. You will learn how some have recently begun to study service from a variety of different perspectives – including social sciences, cognitive science, management, engineering, and others – to address these problems. This new approach is called *service science*. You will learn how this kind of interdisciplinary research might be effective in studying and understanding service. In the end, you will be able to have an informed and intelligent conversation about the nature of service, how to think about measurement in service, and how to increase innovation in service. And you will be (at least a little more) ready for the workforce you are about to enter.

Course Learning Outcomes: Wait… what will you be learning?

By the end of this course, you will be able to:

1. Define "service" and articulate the study of service science.
2. Differentiate service from other sectors and other jobs, and articulate why this differentiation is important.
3. Describe problems in the service sector and their origins.
4. Use disciplinary perspectives of the social sciences, cognitive science, management, and engineering to interpret the study service and address problems within the sector.
5. Describe measurement practices in service and how to increase innovation in service.

To support success across the Service Science minor coursework, these course learning outcomes will help you reach the Service Science *Program Learning Outcomes* (see the SSHA Service Science webpage for more information):

1. Describe through a multidisciplinary lens the process of how knowledge is converted to value in the services sector
2. Assess how goods and services can be improved, administered, and optimized
3. Apply appropriate information technology to analyze basic business processes and recommend strategies for improvement and optimization
4. Present basic knowledge of the relationship between IT and service systems
5. Use professionalism in writing and speaking that is consistent with the discipline

To support success across the Management coursework, these course learning outcomes will help you reach the Management *Program Learning Outcomes* 2, 3, and 5 (see the SSHA Management webpage for more information):

2. Apply theories and concepts from the discipline of Management and related fields (e.g. accounting, economics, statistics, finance, marketing, human resource management, strategy and business law) to management situations.

3. Use effective written and oral communication consistent with the discipline and professional environments.

5. Evaluate ethical, social, and external issues as they relate to the organization, operations, and people.

To support success across the Cognitive Science coursework, these course learning outcomes will help you reach the Cognitive Science *Program Learning Outcomes* 1 and 3 (see the SSHA Cognitive Science webpage for more information):

1. Explain and apply knowledge of landmark findings and theories in cognitive science, and use that knowledge as context for understanding the current state of affairs.

3. Interpret and appreciate formal and computational approaches in cognitive science.

Required Readings

Books (available at the UC Merced Bookstore)

Hsieh, T. (2010). *Delivering happiness: A path to profits, passion, and purpose.* New York: Business Plus.

Book Chapters (eBook available for purchase on web)

Fitzsimmons, J. A. & Fitzsimmons, M. (2011). *Service Management: Operations, Strategy, and Information Technology* (Seventh Edition). McGraw Hill.

DO NOT BUY THE WHOLE BOOK

To purchase the chapters needed for this class (for $39.58), go to

http://create.mheducation.com/shop/#/catalog/details/?isbn=9781308202808

Articles and Chapters (Available through UCM library via CatCourses)

Bitner, M. J. (1992). The impact of physical surroundings on customers and employees. *Journal of Marketing*, 56(2), 57-71.

Campbell, C. S., Maglio, P. P. & Davis, M. M. (2011). From self-service to super-service: How to shift the boundary between customer and provider. *Information Systems and eBusiness Management*, 9(2) 173-191.

Chase, R. B. (1978). Where does the customer fit in a service operation? *Harvard Business Review, 56*, 137 – 142.

Chesbrough, H. & Davies, A. (2010). Advancing services innovation: Five key concepts. In P. P. Maglio, C. A. Kieliszewski, & J. C. Spohrer (Eds.), *Handbook of service science*. New York: Springer.

Clark, H. H. & Brennan, S. E. (1991). Grounding in communication. In L. B. Resnick, J. M. Levine & S. D. Teasley (Eds.), *Perspectives on Socially Shared Cognition.* APA Press.

Frei, F. X. (2008). The four things a service business must get right. *Harvard Business Review* (April): 70-80.

Glushko, R. J. (2010). Seven contexts for service system design. In P. P. Maglio, C. A. Kieliszewski, & J. C. Spohrer (Eds.), *Handbook of service science*. New York: Springer.

Gummesson, E. (2010). The future of service is long overdue. In P. P. Maglio, C. A. Kieliszewski, & J. C. Spohrer (Eds.), *Handbook of service science*. New York: Springer.

Hutchins, E. (1995). How a cockpit remembers its speeds. *Cognitive Science, 19*, 265 – 288.

Lovelock, C. & Gummesson, E. (2004). Whither services marketing? In search of a new paradigm and fresh perspectives. *Journal of Service Research, 7*, 20 – 41.

Maglio, P. P., Kandogan, E., & Haber, E. (2008). Distributed cognition and joint activity in computer-system administration. In M. S. Ackerman, C. Halverson, T. Erickson, & W. A. Kellogg (Eds.), *Resources, co-evolution, and artifacts: Theory in CSCW*. New York: Springer.

Maglio, P. P., Srinivasan, S., Kreulen, J. T., Spohrer, J. (2006). Service systems, service scientists, SSME, and innovation. *Communications of the ACM, 49*, 81– 85.

Maglio, P. P. & Spohrer, J. (2008). Fundamentals of service science. *Journal of the Academy of Marketing Science*, 36, 18-20.

Normann, R. & Ramirez, R. (1993). From value chain to value constellation: Designing interactive strategy. *Harvard Business Review, 71*, 65 – 77.

Spohrer, J. & Maglio, P. P. (2010). Service science: Toward a smarter planet. In W. Karwowski & G. Salvendy (Eds.), *Introduction to service engineering*. New York: Wiley & Sons.

Spohrer, J., Maglio, P. P., Bailey, J. & Gruhl, D. (2007). Steps toward a science of service systems. *Computer, 40*, 71-77.

Vargo, S. L. & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing, 68*, 1 – 17.

Optional Readings (Available through UCM Library via CatCourses)

Bitner, M. J., Ostrom, A. L., & Meuter, M. L. (2002). Implementing successful self-service technologies. *Academy of Marketing Executive, 16*, 96 – 109.

Bitner, M. J., Ostrom, A. & Morgan, F. (2008). Service blueprinting: A practical technique for service innovation. *California Management Review, 50,* 66 – 94.

Chase, R. B. & Dasu, S. (2001). Want to perfect your company's service? Use behavioral science. *Harvard Business Review*, (June), 79 – 84.

Chesbrough, H. (2011). Bringing open innovation to services. *Sloan Management Review*, 52, 85-90.

Frei, F. X. (2006). Breaking the trade-off between efficiency and service. *Harvard Business Review, 84*, 93 – 101.

Gadrey, J. (2002). The misuse of productivity concepts in services: Lessons from a comparison between France and the United States. In J. Gadrey & F. Gallouj (Eds). *Productivity, Innovation, and Knowledge in Services: New Economic and Socio-economic Approaches.* Cheltenham UK: Edward Elgar, pp. 26 – 53.

Glushko, R, J. & Nomorosa, K. J. (2013). Substituting information for interaction: A framework for personalization in service encounters and service systems. *Journal of Service Research*, 16, 21-38.

Haber, E., Kandogan, E. & Maglio, P. P (2011). Collaboration in system administration. *Communications of the ACM,* 54(1), 46-53.

Hagel, J. & Singer, M. (2000). Unbundling the corporation. *The McKinsey Quarterly*, *2000/3*, 148 – 161.

Hart, C. W. L., Heskett, J. L. & Sasser Jr., W. E. (1990). The profitable art of service recovery. *Harvard Business Review*, July-August 1990.

Herzenberg, S., Alic, J. & Wial, H. (1999). A new deal for a new economy. *Challenge, 42*, 102 – 129.

Heskett, J. L., Jones, T. O., Loveman, G. O., Sasser, W. E., Schlesinger, L. A. (1994). Putting the service profit chain to work. *Harvard Business Review, 72,* 164 – 174.

IfM & IBM (2008). *Succeeding through service innovation: A service perspective for education, research, business and government*. Cambridge, UK: University of Cambridge Institute for Manufacturing. ISBN: 978-1-902546-65-0

Johnson, B. C., Manyika, J. M., & Yee, L. A. (2005). The next revolution in interactions. *The McKinsey Quarterly, 2005/4*, 20 – 33.

Maglio, P. P. & Spohrer, J. (2013). A service science perspective on business model innovation. *Industrial Marketing Management*.

Maglio, P. P., Vargo, S. L., Caswell, N. & Spohrer, J. (2009). The service system is the basic abstraction of service science. *Information Systems and e-business Management,* 7, 395-406.

Palmisano, S. J. (2006). The globally integrated enterprise. *Foreign Affairs, 85*, 127 – 136.

Prahalad, C. K. & Ramaswamy, V. (2000). Co-opting customer competence, *Harvard Business Review*, 78, 79-93.

Schneider & Bowen (2010). Winning the service game: Revisiting the rules by which people co-create value. In P. P. Maglio, C. A. Kieliszewski, & J. C. Spohrer (Eds.), *Handbook of service science*. New York: Springer.

Spohrer, J. & Maglio, P. P. (2008). The emergence of service science: Toward systematic service innovations to accelerate co-creation of value. *Production and Operations Management*, 17(3), 1-9.

Syllabus

Aug 30 ***Lecture 1: What is Service?***
Reading: Fitzsimmons & Fitzsimmons (2011), Chapter 1 (pp. 1-14)
Optional: Herzenberg et al (1999)

Sept 6 ***Lecture 2: Service Culture***
Reading: Fitzsimmons & Fitzsimmons (2011), Chapter 9 (pp. 15-33)
Optional: Heskett et al (1994), Schneider & Bowen (2010)
Assignment due: **Service Experiences**

Sept 13 ***Lecture 3: Service Customers***
Reading: Chase (1978)
Fitzsimmons & Fitzsimmons (2011), Ch. 2 (pp. 35-52)
Optional: Chase & Dasu (2001)

Sept 20 ***Lecture 4: "Delivering Happiness"***
Reading: Hsieh (2010)
Optional: Prahalad & Ramaswamy (2000)
Guest Speaker: **Steve Shackelton**, National Park Service and UC Merced

Sept 27 ***Lecture 5: Service Quality***
Reading: Fitzsimmons & Fitzsimmons (2011), Ch. 6 (pp. 53-86)
Optional: Gadrey (2002)
Assignment due: **Service Complaints**

Oct 4 **Exam I**

Oct 11 ***Lecture 6: Service Cognition***
Reading: Clark & Brennan (1991), Hutchins (1995), Maglio et al (2008)
Optional: Haber et al. (2011), Johnson et al (2005)
Guest Speaker**: Teenie Matlock,** UC Merced

Oct 18 ***Lecture 7: Service Design***
Reading: Fitzsimmons & Fitzsimmons (2011), Ch. 4 (pp. 105-128)
Bitner (1992), Glushko (2010)
Optional: Bitner, Ostrom & Morgan (2008), Glushko and Nomorosa (2013)

Oct 25 ***Lecture 8: Service Technology***
Reading: Campbell, Maglio & Davis (2011),
Fitzsimmons & Fitzsimmons (2011), Ch. 5 (pp. 87-103)
Optional: Bitner et al (2002)
Guest Speaker: **Matthew Matlock,** Deloitte Consulting

Nov 1 ***Lecture 9: Service Innovation***
Reading: Chesbrough & Davies (2010), Normann & Ramirez (1993)
Optional: Chesbrough (2011)
Assignment due: **Service Design**
Guest Speaker: **Pat Selinger**, Allstate Insurance

Nov 8 ***Lecture 10: Service Optimization***
Reading: Fitzsimmons & Fitzsimmons (2011), Ch. 12 (pp. 129-148)

Optional: Hagel & Singer (2000)
Guest Speaker: **Tyson Kopczynsk** and **David Needham**, Oportun

Nov 15 ***Exam II***

Nov 22 ***Lecture 11: Service Thinking***
Reading: Frei (2008), Lovelock & Gummesson (2004), Vargo & Lusch (2004)
Optional: Frei (2006), Hart et al. (1990), Maglio et al (2009)
Guest Speaker: **Jim Spohrer**, IBM (tentative)

Nov 29 ***Lecture 12: Service Science***
Reading: Maglio et al (2006), Maglio & Spohrer (2008), Spohrer et al (2007)
Optional: Maglio & Spohrer (2013), Spohrer & Maglio (2008)
Assignment due: **Service Innovation**

Dec 6 ***Lecture 13: Service Past and Future***
Reading: Fitzsimmons & Fitzsimmons (2011), Chapter 14 (pp. 149-167)
Gummesson (2010), Spohrer & Maglio (2010)
Optional: IfM & IBM (2008), Palmisano (2006)

Dec 13 ***Final Exam*** – 8:00AM, COB2 130