

COLUMBIA UNIVERSITY
GRADUATE SCHOOL OF BUSINESS
Service Operations Management

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Course Description:

The service sector represents the largest segment of most industrial economies. For example, in the U.S., it accounts for approximately two-third of GDP and four-fifth of employment. Operational excellence is critical for success in any service today, and its importance is increasing due to industry deregulation (e.g. transportation, banking, communications, energy, health care), global competition and due to digital transformation of services. However, understanding service operations is not easy. Services are intangible, highly variable, not storable or transportable and often involve distributed operations with a significant amount of customer contact. This means that most service operations look quite different than manufacturing operations, and they often require specialized analytical frameworks and tools.

In this course, we will examine approaches for achieving operational competitiveness in a service business and introduce several tools for analyzing service operations. We will apply these approaches and tools to cases from service sectors such as health care, banking and financial services, transportation, restaurants and information-based services. The course addresses both strategic analysis and operational decision making. Among the topics covered are:

- Service concept and operations strategy
- Service delivery system design, capacity management, response time analysis
- Service quality, five-gaps and Kano's models
- Benchmarking and productivity improvement; identification of role-model and targeted learning
- Digital transformation of services
- The role of big data and analytics in linking customer service to profitability
- Performance based incentive system design; engineering human behavior towards service excellence
- Lean-startup, freemium model and viral marketing
- Network effect, two & three-sided platforms, barrier to entry, and winners-take-all markets.
- The rise of sharing economy
- Globalization of services: outsourcing and offshoring, third-party and captive models
- Fintech, Digital payments and banking for unbaked population

The course is intended for students interested in consulting, entrepreneurship, venture capital, non-profit management or general management careers that will involve significant analysis of a service firm's operations.

Method of Instruction:

It is a case based-course that will rely on both qualitative discussion (60%) and quantitative models (40%). A course-pack with readings and cases will be distributed. Additional readings and assignments will be handed out in class as needed. The workload consists of case preparation, class participation, polls, assignments and a final exam.

Method of Evaluation:

Your grade in the course will be based on both your individual and group efforts and performance. I will try to assess your understanding of the tools and concepts covered, your ability to integrate and apply them, and your contributions to the class's learning experience. To do this, I will weight various activities in the following manner:

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| • Class Participation | 25% |
| • Written Assignments & Polls | 25% |
| • Final Exam | 50% |

Class Participation

Reading materials from the casebook are assigned for most class sessions. The assigned material should be read before class to facilitate comprehension and discussion of the material. If a case study is assigned for class, you should read the case thoroughly to understand fully the pertinent facts and the situations and issues raised. You shall discuss and analyze the readings and the cases together with the members of your group. It is important that you strive to be a vital contributor to class discussions. I will judge class participation on the extent to which you appear prepared, the relevance and depth of your comments, the degree to which you listen carefully and respond to your peers, and your willingness to take chances in order to further the educational experiences of others.

Assignments

There are two types of assignments: (i) case assignments to be done in groups, and (ii) polls to be done individually. Case assignments typically consist of an "executive summary" write-up of a case study which include a quantitative analysis. These must be done in groups 3-4. Since the main purpose of these assignments is to provide a chance for you to apply analytical techniques to a new problem, a fair amount of latitude is given for errors. Polls are designed to make sure that you have read the cases and have thought about the pertinent issues raised in the case.

Exam

There will be a take-home, open notes individual exam for this course. You will have one week to finish the exam (expected completion time 3 hours, but no time limit).

Course at a Glance

Class	Topic	Cases & Readings
1	Introduction. The nature and classification of services. Service productivity lag. Service design and operations strategy.	Classifying Services to Gain Strategic Marketing Insights
2	Leveraging value over cost in service delivery. Concept of service factory. Service quality: Five gap model. Kano's model. Service over time.	<i>Case: Benihana of Tokyo</i>
3	Linking the service model to the P&L. Translating the service model to service operations. Changing employee behavior	<i>Cases: TD Canada Trust (A), (B)</i>
4	Refining incentive mechanism. Freeium model. Lean Start-up.	<i>Case: TD Canada Trust (C)</i> <i>Case: Dropbox: "It Just Works"</i>
5	Measuring service productivity. Benchmarking productivity.	Data Envelopment Analysis (DEA)
6	Case Study in DEA; General queuing models and Queue Design	<i>Case: Branch Performance at Nashville National Bank</i> Note on Processing Systems with Variation
7	Interpreting DEA analysis. Psychology of queues. Service System Design for faster turnaround time.	<i>Case: Modell's DEA</i> <i>Case: University Health Services: Walk-In Clinic</i>
8	Call center capacity planning. Queueing approximations. Multi-Sided Platforms; Network effect & Scaling	<i>Cases: Uber Pricing Strategies</i> <i>Case: Uber in China</i>
9	Outsourcing & Offshoring Case study in call center planning	Will You Survive the Services Revolution? <i>Case: Megacard Corporation</i>
10	Mobile Payment Services: Bottom of Pyramid Models Mobile Payment Services: Solving rich world's problem Apple Pay, Chase Pay, CurrentC, Square, etc.	<i>Case: M-Pesa</i> <i>Case: Apple Pay.</i>
11	Digital Payments, Open banking	Stripe, Paypal and Plaid
12	Measuring Performance in Client Relations; Understanding Evolving Customer Needs and Relationship Building.	<i>Case: Infosys's Relationship Scorecard: Transformational Partnerships</i>