

# MGSC 486

## Service Operations Management

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Syllabus – Fall 2007

**Professor:** Dr. Michael R. Galbreth  
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**Office hours:** Tuesdays, 2:00pm-4:00pm  
(or any other time – just email me to make an appointment)

**Classroom:** 364

*Important Note: this class will meet in the computer case room (701) for several class meetings. See the Detailed Course Outline below for specifics.*

**Class Time:** Monday/Wednesday, 9:30am – 10:45am

### Course Description

Service organizations represent a significant portion of the global economy, accounting for more than 70% of total economic output and 60% of employment worldwide. However, the service sector has consistently lagged the manufacturing sector in terms of productivity growth. Considerable opportunities remain for service firms to better manage their operations.

This course focuses on the management of service operations, with considerable attention paid to cutting-edge quantitative techniques that can help services firms improve their operations. We will discuss approaches to key managerial decisions such as waiting line management, facility location, multiple site performance evaluation, and others.

### Course Materials

Metters, R. et al., *Successful Service Operations Management*, 2e.

Hartvigsen, D., *SimQuick*, second edition. [one copy per team]

Case Packet: available at the University Bookstore

### Grading Policy and Class Design

The course grade will be determined as follows:

Exam 1	15%
Exam 2	15%
Final exam	25%
Revenue management game	5%
Homework assignments	40% (4 x 10%)

## Homework Assignments

All homework assignments can be completed individually or in teams. Individual grades for homeworks done in teams will be adjusted using team peer evaluations – students who fail to pull their own weight in their teams will be penalized. *Before the beginning of the second class, please send me an e-mail with the members of your homework team (4 or 5 members per team).*

## MGSC 486 Service Operations Management – Course Overview:

Sessions	Topic
1-3	Managing Waiting Lines
4-6	Designing the Service Delivery System
7	Exam 1: September 19, 2007
8-11	Selecting the Location for a Service Operation
12-13	Managing the Service Experience
14-16	Service Site Performance Evaluation
17	Exam 2: October 24, 2007
18-21	Revenue Management
22-27	Service Quality & Strategy
28	Airport Tour: December 5, 2007
<b>FINAL EXAM: Saturday, December 15, 2007, 9:00am – 11:00am</b>	

## Detailed Course Outline

### ***PART I – Waiting Line Management***

**8/27/2007:**

**Session 1 – Course Overview and Waiting Lines Introduction**

<b>Class Topic</b>	<b>Required Preparation</b>
Course Introduction and Waiting Lines Introduction	None

**8/29/2007:**

**Session 2 – Quantitative Tool Introduction: Waiting Line Analysis**

<b>Class Topic</b>	<b>Required Preparation</b>
Quantitative Methods for Analyzing Customer Waiting	None, but note that <b><i>class meets in Room 701 (Computer Case Room) today</i></b>

**9/5/2007:**

**Session 3 – Case discussion: Service Capacity in Call Centers**

<b>Class Topic</b>	<b>Required Preparation</b>
Staff Scheduling and Bank Branch Tellers Case (Metters textbook)	<b>Homework is due</b> at the beginning of class – each team must turn in a <i>hard copy</i> of their spreadsheet analysis that answers <b>questions 1 and 2</b> from the case (we will discuss the other questions in class, but your homework is only questions 1 and 2). Use the shell file posted on Blackboard ( <i>not</i> the file from your student CD) as a starting point for answering the questions.

### ***PART II – Service Delivery System Design***

**9/10/2007:**

**Session 4 – Overview: Service Delivery System Design**

<b>Class Topic</b>	<b>Required Preparation</b>
Service Delivery Systems	None

**9/12/2007:**

**Session 5 – Quantitative Tool Introduction: Simulation**

<b>Class Topic</b>	<b>Required Preparation</b>
Simulation using SimQuick	<b><i>Class meets in Room 701 (Computer Case Room) today.</i></b> Each team should bring your SimQuick CD and booklet to class.

**9/17/2007:**

**Session 6 – Case discussion: Delivery System Design for Airline Check-in**

<b>Class Topic</b>	<b>Required Preparation</b>
Nash Vegas Air case (on Blackboard)	<b>Homework is due</b> at the beginning of class. Your analysis should answer the questions in the case.

9/19/2007:  
Session 7 – EXAM 1  
*topics covered: all of Parts I and II*

***PART III – Service Location***

**9/24/2007 & 9/26/2007:**

**Sessions 8-9 – Overview: Site Selection Methods**

<b>Class Topic</b>	<b>Required Preparation</b>
Site selection methods	none

**10/1/2007:**

**Session 10 – Case discussion: Regression-based Site Selection for Hotels**

<b>Class Topic</b>	<b>Required Preparation</b>
La Quinta case	<b>Homework is due</b> at the beginning of class – see assignment below.

1. Report any records in the case data that appear to be outliers. For these records, take the conservative approach and eliminate them from the dataset before answering question 2
2. Construct a regression model to evaluate potential locations A through F (which can be found in the bottom rows of the case data). Use OP\_M\_83 as your dependent variable. Report your regression equation and adjusted  $R^2$ . **IMPORTANT NOTE: there is no single correct answer to this question – your choices of what to include in your model will be subjective, based on what you think makes sense as a predictor of operating margin.**
3. Rank the six candidate locations from best to worst using your regression model.

10/3/2007:

Session 11 – Guest Speaker: Geographic Information Systems  
*an overview of ESRI Business Analyst – the state of the art in GIS software*

***PART IV – Managing the Service Experience***

**10/8/2007:**

**Session 12 – Overview: The Service Experience**

<b>Class Topic</b>	<b>Required Preparation</b>
Service Experience Management	none

**10/10/2007:**

**Session 13 – Case discussion: Managing Service Experiences at an Amusement Park**

<b>Class Topic</b>	<b>Required Preparation</b>
PY and the Dome case (textbook)	Read the case carefully and consider the key managerial issues.

***PART V – Multiple Site Performance Evaluation***

**10/15/2007:**

**Session 14 – Quantitative Tool Introduction: Data Envelopment Analysis (DEA)**

<b>Class Topic</b>	<b>Required Preparation</b>
DEA	None.

**10/17/2007:**

**Session 15 – Quantitative Tool (continued): Data Envelopment Analysis (DEA)**

<b>Class Topic</b>	<b>Required Preparation</b>
DEA	None, but <b><i>class meets in Room 701 (Computer Case Room) today.</i></b>

**10/22/2007:**

**Session 16 – Case discussion: DEA Application to Bank Branches**

<b>Class Topic</b>	<b>Required Preparation</b>
Nashville National Bank case (textbook)	<b>Homework is due</b> at the beginning of class – see assignment below.

1. Construct a DEA model that is superior to the one provided by Julie. Briefly explain why your model is better. Turn in a hard copy of your DEA spreadsheet (just one hard copy – it can show the solution for any one branch), and report the efficiencies for each branch according to your model.

10/24/2007:  
Session 17 – EXAM 2  
*topics covered: all of Parts III, IV, and V (including guest speaker)*

***PART VI – Revenue Management***

**10/29/2007 & 10/31/2007:**  
Sessions 18 & 19 – Overview: Revenue Management

Class Topic	Required Preparation
Revenue Management	none

Friday, 11/2/2007:  
Special Class Meeting: Revenue Management Game  
*Read the Motherland Air Case in the textbook and prepare (in teams) to play this in-class game. Teams must sign up for one of two game sessions:*  
*Session 1: 10:00am – 12:00noon*  
*Session 2: 2:00pm – 4:00pm*

**11/5/2007 & 11/7/2007:**  
Sessions 20 and 21 will be **CANCELLED** – the revenue management game on Friday, 11/2/2007 will count as two class meetings.

***PART VII – Service Quality & Strategy***

**11/12/2007:**  
Session 22 – Offshoring Services Video: 1-800-INDIA

Class Topic	Required Preparation
Watch this documentary of the impact of offshoring service operations to India	None

**11/14/2007 & 11/19/2007:**

**Sessions 23 & 24 – Overview: Service Quality**

<b>Class Topic</b>	<b>Required Preparation</b>
Ensuring and Improving Service Quality	None

**11/26/2007:**

**Session 25 – Case discussion: Quality in Airline Operations**

<b>Class Topic</b>	<b>Required Preparation</b>
Southwest Airlines (case packet)	Read the case carefully and consider the key managerial issues.

**11/28/2007:**

**Session 26 – Overview: Service Strategy**

<b>Class Topic</b>	<b>Required Preparation</b>
Strategy for Service Firms	None

**12/3/2007:**

**Session 27 – Case discussion: Strategy in Retail Food/Beverage**

<b>Class Topic</b>	<b>Required Preparation</b>
Starbucks (case packet)	Read the case carefully and consider the key managerial issues.

**12/5/2006:**

**Session 28 – Columbia Metropolitan Airport site visit:  
*a behind-the-scenes look at airport operations***

**12/15/2007:**

**FINAL EXAM: 9:00am – 11:00am**

*~60% of the exam will cover topics from Parts VI and VII  
~40% of the exam will cover topics from Parts I through V*