

Course Outline

Course Code : DOS 3703
Course Title : Service Operations Management
Class Date : From 10/8/2026 To 13/11/2026
Semester : Semester 1, Academic Year 2026-27
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Overview

Dominant and ever-increasing role of Service Operations:

Today the service sector is dominating the economies of most developed nations. In the United States, service sector accounts for over three fourth of the GDP and almost 85% of employment. In Singapore, the services sector, a vital engine of growth, contributes to over 75% of employment and to over 60% of the GDP.

In today's environment almost every manufacturing firm also has, as a part of business strategy, specific business units providing service operations. This will provide the competitive edge and thus increase customer satisfaction. Jerry Gregoire, CIO, Dell Computers says, "The customer experience is the next competitive battleground".

Importance of operational efficiency in Services:

Under these circumstances, while efficiency is one key ingredient for a successful firm, for a service industry this is especially true. Management in the service industry is affected by the challenges of non-tangible aspects which play key role in customer satisfaction and hence impact efficiency. Hence understanding how to efficiently run and manage service operations will provide a significant advantage to graduates who are most likely to find themselves employed by a service based or service-oriented firm, in the present environment.

Course Objectives

Two aspects which will form the background of the course are: the importance of aligning the design and management of services with the marketing strategy of the firm and the impact and management of variability in services.

The course will focus on providing students with an understanding of:

- how to analyze service operations, how decision making differs and how implementation hurdles are addressed while operating services.
- how strategic vision is a necessity for successful service companies - whether they are banks, airlines, hospitals, utilities, retailing, restaurants, or theatre groups. Consequently, the course will explore basic elements of the service operations strategy. These concepts will be illustrated with a wide range of examples from health care, financial services, retail, delivery services, airlines, etc.
- how to use numerous quantitative tools and models which will help the students to model, to analyze and to manage in this complex environment.
- How has the digital internet era started redefining service operations.

Assessment

Assessment Components	Weightage
Individual Simulation Assignment	10%
Group Class Presentation	10%
Group Assignment	15%
Group Project	20%
Individual Midterm Test – during 7 th week class	15%
Individual Final Test – during 13 th week class	30%

Schedule and Outline

Lesson/ Week	Session	Theme
1	Session-01	<i>Course Intro - Dominating role of Service Operations in today's world Focus: Recap OM relevant basics, historical operations; ops & competitive strategy</i>
2	Session-02	<i>Tools for monitoring price and cost Focus - BEP with a difference/ABC for service ops /Price Waterfall effect</i>
3	Session-03	<i>Tools for estimation - manpower Learning Curve & its application</i>
4	Session-04	<i>Tools for estimation - demand Focus - Forecasting techniques</i>
	Session-05	<i>Tools for Prediction Focus on Guesstimation</i>
6	Session-06	<i>Tools using bottleneck Focus - Line balancing tools and Theory of constraints</i>
	Session -07	Midterm test <i>Tools for Product mix decision</i>
7	Session-08	<i>Tools for setting up operations -project management Focus - CPM/ PERT and crashing activities</i>
8	Session-09	<i>Managing probabilistic situations -Monte Carlo simulation Focus - On time departure / where to sell /Profit prediction situations</i>
9	Session-10	<i>Further on simulation application for service ops. Focus - Application in planning inventory/ interpreting customer complaints</i>
10	Session-11	<i>Differential pricing in service operation Focus - Differential Pricing & Yield Management in airlines and hotels</i>
11	Session-12	<i>Select tools for Location planning Focus - Key Location planning techniques</i>
13	Session-13	Final test

General Guide & Reading (e.g. Case preparation guide, project report guide, main textbook & supplementary materials, etc)

Reference Text: Service Management Operations, Strategy, Information Technology - James A Fitzsimmons & Mona J Fitzsimmons; supplementary material will be provided for each session in Canvas.

Academic Honesty & Plagiarism

Academic integrity and honesty is essential for the pursuit and acquisition of knowledge. The University and School expect every student to uphold academic integrity & honesty at all times. Academic dishonesty is any misrepresentation with the intent to deceive, or failure to acknowledge the source, or falsification of information, or inaccuracy of statements, or cheating at examinations/tests, or inappropriate use of resources.

Plagiarism is 'the practice of taking someone else's work or ideas and passing them off as one's own' (The New Oxford Dictionary of English). The University and School will not condone plagiarism. Students should adopt this rule - You have the obligation to make clear to the assessor which is your own work, and which is the work of others. Otherwise, your assessor is entitled to assume that everything being presented for assessment is being presented as entirely your own work. This is a minimum standard. In case of any doubts, you should consult your instructor.

Additional guidance is available at:

- [Administrative Policies](#)
- <http://www.nus.edu.sg/registrar/administrative-policies-procedures/acceptance-record#NUSCodeofStudentConduct>
- <http://nus.edu.sg/osa/resources/code-of-student-conduct>