

Course Information Sheet

Course: BUDT 758O (Operations Management for Health Services Organizations)

Semester: Winter 2009

Instructor: Dr. Bruce L. Golden

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Course location: Baltimore campus, Room 150

Course dates: 1/3, 1/4, 1/17, 1/18

Course times: Noon to 6:15 p.m.

Course Overview: Health care costs continue to increase rapidly in the U.S. In 2005, they increased almost 7% to nearly \$2.0 trillion or 16% of GDP! Approximately 31% of all health care spending in 2005 involved hospital spending. Therefore, it makes sense to focus our attention on the operation of hospitals.

The purpose of this course is to focus on improving the operations of health services organizations and, more generally, on managing health care organizations. In particular, we will discuss the application of ideas and practical techniques from focused operations management to the study of hospitals and health maintenance organizations (HMOs). Of course, these tools can also be applied to other nonprofit and for-profit organizations both within and outside of the health care sector.

Three fundamental and related questions that plague hospital administrators are:

1. How can we increase throughput?

2. How can we identify and remove bottlenecks?
3. How can we do more with current resources?

In this course, we will introduce a variety of tools that have been used to increase throughput, reduce response time, and create value in the health care sector. In other words, these tools help us answer the above questions.

The course is intended to be very practical. Leaders and decision makers from the University of Maryland Medical Center and the University of Maryland School of Medicine will be invited to speak with the class.

- Tentative Outline:
- I. The Modern Health Care and Business Environment
 - II. Principles of Management in a Dynamic Environment
 - III. The Pareto Rule, Focusing Table, and Focusing Matrix
 - IV. Management by Constraints: The Focusing Steps of the Theory of Constraints
 - V. Management by Constraints in a Bottleneck Environment
 - VI. Management by Constraints When the Market is the Constraint
 - VII. The Evils of Long Response Times
 - VIII. Reducing Response Times
 - IX. The Complete Kit Concept
 - X. Performance Measures and Managerial Control
 - XI. Effects of Fluctuations, Variability, and Uncertainty on the System
 - XII. Quality Management and Process Control

Required Text: B. Ronen, J. Pliskin, S. Pass, Focused Operations Management for Health Services Organizations, Jossey-Bass (2006).

- Reference Books:
1. M. Brandeau, F. Sainfort, W. Pierskalla (Eds.), Operations Research and Health Care: A Handbook of Methods and Applications, Springer/Kluwer (2004).
 2. R. Hall (Ed.), Patient Flow: Reducing Delay in Healthcare Delivery, Springer (2006).

3. Y. Ozcan, Quantitative Methods in Health Care Management: Techniques and Applications, Jossey-Bass (2005).
4. M. Porter, E.O. Teisberg, Redefining Health Care, HBS Press (2006).
5. J. Wright, R. King, We All Fall Down, North River Press (2006).
6. J. Langabeer II, Health Care Operations Management, Jones and Bartlett (2008).

Course Notes: The Power Point slides presented in class will be posted on my web site, which can be accessed via my home page.

Grading: The final grade will be based on four components as indicated below:

Quizzes (individual)	20%
Team Project 1	35%
Team Project 2	35%
Classroom participation	<u>10%</u>
	100%

Quizzes: Quizzes will be given at the beginning of most classes and at other times, as well. The purpose is to evaluate your understanding of topics covered in previous classes and to encourage you to review this material on a regular basis.

Classroom Participation: We seek a classroom environment in which students are engaged and contribute to the discussion. The quality of the participation is more important than the quantity.

Team Projects: To be discussed.

Academic Integrity: The University's Code of Academic Integrity is designed to ensure that the principles of academic honesty and integrity are upheld. All students are expected to adhere to this Code. The Smith School does not tolerate academic dishonesty. All acts of academic dishonesty will be dealt with in accordance with the provisions of this code. Please visit the following website for more information on the University's Code of Academic Integrity:
<http://www.studenthonorcouncil.umd.edu/code.html>

On each exam or assignment you will be asked to write out and sign the following pledge. "I pledge on my honor that I have not given or received any unauthorized assistance on this exam/assignment."

Special Needs: Any student with special needs should bring this to the attention of the instructor as soon as possible, but not later than the second day of class.

About the Professor: Bruce Golden received his undergraduate degree in mathematics from the University of Pennsylvania and his masters and doctoral degrees from the Massachusetts Institute of Technology. He joined the faculty of the University of Maryland Business School in 1976 and served as a Department Chairman from 1980 to 1996. Currently, he is the France-Merrick Chair in Management Science in the Robert H. Smith School of Business at the University of Maryland. His research interests include heuristic search, combinatorial optimization, networks, applied operations research, and health care. Bruce has received numerous awards, including the Thomas L. Saaty Prize (1994 and 2005), the University of Maryland Distinguished Scholar-Teacher Award (2000), the INFORMS Award for the Teaching of OR/MS Practice (2003), and the INFORMS Computing Society Prize (2005). He was named an INFORMS Fellow in 2004. Since 1999, Bruce has served as Editor-in-Chief of *Networks*. Before that, he was Editor-in-Chief of the *INFORMS Journal on Computing*.

In addition, he has received numerous contracts and grants, has consulted for a wide variety of organizations, and has served on the Board of Directors of several high-tech companies based in Maryland. In 1980, he founded a management consulting company with several colleagues. The focus was on business logistics. Clients included IBM, UPS, the U.S. Postal Service, the U.S. Air Force, the U.S. Army, Federal Express, Toyota, DuPont, and many others. In the late 1980's, Bruce co-founded a second company, specializing in the design and sales of vehicle routing software products. He and his partners successfully grew these companies and sold them in late 1998. The surviving company is RouteSmart Technologies, Inc.

For the last three years, Bruce has been working with the University of Maryland Medical Center (UMMC) on a variety of projects to increase hospital throughput. He is currently a member of the UMMC Operations Research Council.