MASTER SYLLABUS

COURSE NUMBER AND HOURS: HCM 410-3 Operations Management and Quality Improvement in Health Care

COURSE DESCRIPTION: Examines the applications of operations management in the framework of health care organizations. Focus will be placed on supply chain and inventory management, forecasting, queuing models, and capacity planning. Determinants to achieve quality management in health care facilities will be explored. Utilizes analytical methods of systematic monitoring and evaluation and the application of quality improvement initiatives. Includes impact on quality of accreditations, credentialing, liability, and governmental regulations. Not for graduate credit.

PREREQUISITES: UCC MATH, HCM 360 and an approved statistics course. Restricted to HCM majors/minors.


COURSE OBJECTIVES:

Upon completion of this course, the student will be able to:

1. Understand the importance of operations management in healthcare settings.
2. Apply the basic tools for project management.
3. Acquire the fundamental techniques for managing quality.
4. Know how to determine the optimal capacity of a healthcare organization.
5. Master the quantitative skills to manage supply chains and inventory.
6. Use computer software, such as Microsoft Excel, to forecast the demand for materials.
7. Apply any necessary statistical tools to manage patient flows.
8. Learn how to choose the location of a health care facility.

COURSE OUTLINE:

<table>
<thead>
<tr>
<th>Topics</th>
<th>Percentage of Time</th>
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<tbody>
<tr>
<td>I. Project management</td>
<td>20%</td>
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<tr>
<td>A. The critical path methods</td>
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<td>B. Program evaluation and review techniques</td>
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<td>II. Quality management</td>
<td>25%</td>
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<tr>
<td>A. Definition of quality</td>
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<td>B. Total quality management (TQM) approach</td>
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<td>C. Six Sigma</td>
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D. Control charts  
E. Other toolkit of quality management  

III. Queuing models and capacity planning 20%  
   A. Queuing system characteristics  
   B. Measures of queuing system performance  
   C. Typical infinite-source models  
   D. Model formulations  

IV. Supply chain management 25%  
   A. Definition of supply chain in health care  
   B. Supply chain management issues for healthcare providers  
   C. Inventory management models  
   D. Forecasting techniques  

V. Facility location choices 10%  
   A. Cost-Profit-Volume (CPV) analysis  
   B. Factor rating models  
   C. Multi-attribute methods