COURSE NO. AND TITLE:

HCM 460-3 Lean Six Sigma in Healthcare

COURSE DESCRIPTION:

An introductory course focusing on the Lean Six Sigma approach to improving quality in healthcare organizations. An exploration of error prevention, problem solving, problem detection, change management, and effective and efficient process improvement. Cases will be used to demonstrate how the approach can be applied specifically to the healthcare industry. Restricted to junior standing and SAH majors or minors.

PREREQUISITES TO: N/A


COURSE OBJECTIVES:

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

- Discuss the concepts of access, cost, quality, and equity as it pertains to healthcare and how quality improvement programs evolved as a result of these concepts.
- Describe how errors and inefficient processes are detrimental to the patients, community, healthcare industry, and society as a whole.
- Explore error prevention process and topics associated with error prevention in healthcare.
- Gain familiarity with regulatory bodies mandating programs which focus on quality improvement.
- Understand the Six Sigma approach and the impact on the healthcare field.
- Gain and in-depth knowledge of the formal procedures required to begin to apply the Six Sigma principles.
- Identify problem solving events and how to use diagrammatic tools and management action.
- Explore workflow cases which provide practical application of the approach in the healthcare environment.
- Review, calculate, and interpret varying analytical processes useful in the Six Sigma approach including but not limited to: data portrayal, potential problem analysis, incomplete trials, data sampling, central limit theorem, and sequential analysis.
- Evaluate Lean Six Sigma approaches to highly effective and efficient organizational process in the healthcare environment.
- Follow detailed instructions without deviation, meet deadlines, take initiative to self-resolve problem issues, communicate in a professional manner in both written and verbal form, and exercise good time management skills and other managerial competencies.
COURSE DELIVERABLES (may vary based on instructor): Assignments, Exams, Quizzes

GRADING SCALE (may vary based on instructor): A=1000-900; B=899-800; C=799-700; D=699-600; F=599 and below

LEARNING/ASSESSMENT METHOD(S): Pre-post Test, Final Grade Percentage

TOPICAL OUTLINE:

<table>
<thead>
<tr>
<th>Topics</th>
<th>Percentages</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Lean and Six Sigma, Why, What How?</td>
<td>30%</td>
</tr>
<tr>
<td>a. Introduction to Lean Six Sigma</td>
<td></td>
</tr>
<tr>
<td>b. What are Six Sigma and Lean?</td>
<td></td>
</tr>
<tr>
<td>c. How are Six Sigma and Lean Applied?</td>
<td></td>
</tr>
<tr>
<td>d. Creating Strategic Advantage</td>
<td></td>
</tr>
<tr>
<td>e. Return on Investment associated with implementing Lean/Six Sigma</td>
<td></td>
</tr>
<tr>
<td>f. DMAIC</td>
<td></td>
</tr>
<tr>
<td>g. Eliminating Waste and Improving Quality</td>
<td></td>
</tr>
<tr>
<td>II. Error Prevention</td>
<td>20%</td>
</tr>
<tr>
<td>a. Poka-Yoke</td>
<td></td>
</tr>
<tr>
<td>b. Topics in Healthcare Error Prevention</td>
<td></td>
</tr>
<tr>
<td>c. Workflow</td>
<td></td>
</tr>
<tr>
<td>d. Complexity and its costs</td>
<td></td>
</tr>
<tr>
<td>III. Problem Solving and Problem Detection</td>
<td>30%</td>
</tr>
<tr>
<td>a. Events</td>
<td></td>
</tr>
<tr>
<td>b. Gathering Data and Data Gaps</td>
<td></td>
</tr>
<tr>
<td>c. Compare and Contrast</td>
<td></td>
</tr>
<tr>
<td>d. Diagrammatic Tools</td>
<td></td>
</tr>
<tr>
<td>e. Management Action</td>
<td></td>
</tr>
<tr>
<td>f. Six Sigma Measures</td>
<td></td>
</tr>
<tr>
<td>g. Six Sigma Operations Analysis</td>
<td></td>
</tr>
<tr>
<td>h. Quantitative Process Analysis</td>
<td></td>
</tr>
<tr>
<td>IV. Change Management</td>
<td>20%</td>
</tr>
<tr>
<td>a. Selecting Change</td>
<td></td>
</tr>
<tr>
<td>b. Lean Six Sigma Impact</td>
<td></td>
</tr>
<tr>
<td>c. Mobilization and Implementation of Lean/Six Sigma</td>
<td></td>
</tr>
</tbody>
</table>