Course Description
Lean Six Sigma Six Sigma techniques, introduced to industry in the late 1980’s, use data-driven decisions to reduce
defects, drive down costs and increase efficiency. This methodology focuses on minimizing process variation, thereby
enabling the process to operate more smoothly and efficiently. Lean is a process that focuses on eliminating waste and
streamlining operations. Lean Six Sigma combines the two processes, providing a powerful tool to make improvements
in any process or business. In this course, students learn the history, context, and tools of Lean/Six Sigma and apply the
process in a course project.

Course Objectives
1) Develop a broad understanding of Lean/Six Sigma principles and practices
2) Build capability to implement Lean/Six Sigma initiatives in manufacturing operations
3) Operate with awareness of Lean/Six Sigma at the enterprise level
4) Develop skills in problem solving and root cause analysis
5) Compare and contrast lean with the Theory of Constraints and Quick Response Manufacturing.
6) Define an appropriate Lean Six Sigma Project

Course Texts

Additional Reading
   Business into a Lean Enterprise. New York: The Oaklea Press
   Productivity Press

Grading and Evaluation:
Exam 1                                      15%
Exam 2                                      15%
Cases                                       20%
Quizzes                                     20%
Final Project                               30%
Grading Scale

<table>
<thead>
<tr>
<th>Grade</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>93-100</td>
<td>Superior</td>
</tr>
<tr>
<td>87-92.99</td>
<td>Very Good</td>
</tr>
<tr>
<td>80-86.99</td>
<td>Good</td>
</tr>
<tr>
<td>77-79.99</td>
<td>Fair</td>
</tr>
<tr>
<td>70-76.99</td>
<td>Acceptable</td>
</tr>
<tr>
<td>60-69.99</td>
<td>Barely Acceptable, Passing</td>
</tr>
<tr>
<td>&lt; 60</td>
<td>Failure</td>
</tr>
<tr>
<td>WA</td>
<td>Withdrawn Excessive Absences (equivalent to F)</td>
</tr>
<tr>
<td>XXF</td>
<td>Failure due to Academic Dishonesty</td>
</tr>
</tbody>
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Course Requirements
- DSCI-232 (Business Statistics)
- DSCI-304 (Operations Management)

School of Business learning goals:
- Goal 1: QUANTITATIVE FLUENCY. Students will demonstrate competency in logical reasoning and data analysis skills solving problems related with quality control and statistical analysis. Assessment will take place in the exams and in the final project.
- Goal 2: INTELLECTUAL INNOVATION AND CREATIVITY. Students will be able to demonstrate their resource fullness and originality in addressing extemporaneous problems integrating their knowledge from multiple sources

Topics Included:
- Introduction to Six Sigma
- Design for Six Sigma
- How to get started with six sigma
- Using Statistics
- Searching for Projects
- Using DMAIC to Improve Service Processes
- Designing World-Class Services
- Using Lean Six Sigma Methods to Identify and Manage Supply Chain Projects
- Deploying Lean Six Sigma Projects Using Lean Tools
- Demand-Management Impact on Lean Six Sigma Projects
- Lead-Time Impact on Lean Six Sigma Projects
- Lean Supply Chains and Third-Party Logistics
- Identifying Lean Six Sigma Projects Using Inventory Models
- Root-Cause Analysis Using Six Sigma
- Lean Six Sigma Improvement and Control

Course Expectations
4. Consider that it is not always my fault if you don’t understand the material.
5. Treat others with respect.
7. Learn the statistics software outside the classroom with guidance from the professor during office hours (Excel).
8. If you are not familiar with excel, it is YOUR responsibility to do the Excel Review by yourself during the first days of class. You are expected at least to have this knowledge for the class.

Policies and Procedure

Attendance Policies
- Students are expected to attend classes. You cannot expect to have a thorough grasp of the material if you miss class. You are responsible for all material or assignments that are covered in class. Students are expected to contribute to class discussion. Class participation, attendance and promptness are expected and highly encouraged. It is not acceptable to be regularly tardy for class. If you miss a quiz /in class assignment due to tardiness, you may not make it up.
- Students ARE ALLOWED TO MISS ONLY TWO CLASS without any penalty . If you miss more than two sessions, you will lose a letter grade per absence. NON-NEGOTIABLE. You don’t have
to come to the professor to excuse your absence, any absence counts for this rule!!

- Attendance will be taken randomly in different time periods of the class. If you are absent at the time of attendance signing, it is considered absence. If you come in late and the attendance has already been passed, you will be considered absent. Don't bother to justify your absence since both justified and unjustified absences count for this rule.

- If you miss a session, the professor WON'T repeat the missed material on office hours, it is your responsibility to read on your own and ask your classmates for missing concepts.

Withdrawal Policy

The professor does not process Instructor Withdrawals after the first evaluation for any reason.

- No makeup exams will be given. It is impossible to make an equivalent exam without the student at either an advantage or disadvantage. If you miss an exam, with or without a legitimate excuse, you will have a zero for that exam. This policy is non-negotiable.

- No makeup quizzes will be given. This policy is non-negotiable. If you registered late for the course and you missed any quizzes, you will have zero on those missing quizzes. The professor cannot wait until the last day to add/drop to start the class.

SNAP Students/Special Accommodations/Athletes

- Students that require special accommodations for exams or athletes must talk to the professor no later than ONE week after the semester start and provide necessary documentation.

- SNAP students are responsible to remind the professor one week in advance before each exam to allow the professor enough preparation time. If a student fails to remind the professor one week in advance before each exam, the student will have the same evaluation time as the rest of the class for that particular exam.

- Center for Student Learning: I encourage you to utilize the Center for Student Learning's (CSL) academic support services for assistance in study strategies and course content. They offer tutoring, Supplemental Instruction, study skills appointments, and workshops. Students of all abilities have become more successful using these programs throughout their academic career and the services are available to you at no additional cost. For more information regarding these services please visit the CSL website at http://csl.cofc.edu or call (843)953-5635.

College of Charleston Honor Code

All work that you submit in this course must be your own; unauthorized group efforts will be considered academic dishonesty. This is particularly important with regards to assignments and exams. The sharing or copying of program files (e.g., spreadsheets) is a form of plagiarism. Academic dishonesty is a serious offense, which may result in a failing grade for the course and/or report to the Honor Board for evaluation. If copying is involved, both parties will be judged equally guilty.

Professional Behavior Guidelines:

- Tardiness: Please arrive on time. If you are later than the start of the class for three times in the semester, it will count as one missed class. If you are late in a quiz day, you have until the other students finish the quiz, the time will not start when you come into the classroom.

- Side Conversations: Side conversations make it difficult for your classmates to actively listen and learn.

- Sleeping: falling asleep in class is not considered professional behavior.

- Inattention: Please don’t read other material (chat, browsing the web, books) or study for other courses during my class. It’s not polite. Please pay attention and join in the individual and group discussions. It will help you master the material.

- Cell Phone: Please set your cell phone to silent mode while you are in the class. Cell rings can disturb your classmates as well as me.

- Printing: Do not print outside work during class. I will turn off the printer at the beginning of class to prevent any interruption to the class.

- Navigating or other computer tasks different than class matters: It is not polite to be doing course work or assignments other than the ones required in class. Also, it is not polite to navigate internet or check email while in class. One point will be taken out from your final grade for every time you do this in class. If you finish your work before other classmates, you might ask for permission to do other work in the computer and until given, you should not do other work.

Miscellaneous Policies:

- Although I will try to maintain the class schedule and objectives, I may need to make adjustments. You are responsible to check WEBCT CALENDAR for the most recent calendar of activities and dates. Don’t ask the professor about quizzes or exams dates, since she will
not give you as accurate information as the WebCT Calendar.

- **I do not give additional projects to increase one’s grade before or after the exam(s). The professor does not round grades; a 59.9 total grade is an F.**

Complaints about Exams

- The professor encourages students to review in detail when exams are returned. You have two days after the graded evaluation was given to you to make any questions or complaints about it. If that time is passed, it means you have accepted the grade given.
- **No complaints are accepted for any reason if the two days period has passed (non-negotiable)**

FINAL PROJECT

General Comments and Guidelines

The following template has been provided as a guideline for the preparation and submission of your final project report required for Lean Six Sigma class. You need instructor approval of your initial idea (and company selected).

Your project submission should:

- Follow as closely as possible the layout and structure of this template
- When you finish your project there should be no instructional language in your report including this page
- Contain similar headings or sections as indicated in this template
- Be as specific as possible in terms of describing your Lean Six Sigma project, including any supporting details or data that for the analysis and conclusions drawn from your project
- Closely adhere to the DMAIC, (Define, Measure, Analyze, Improve and Control), including the description of the project, key milestones from each phase of the DMAIC cycle
- Present a professional, compelling and sufficiently detailed account of your Lean Six Sigma project, and your role in that process
- Typical Lean Six Sigma reports are 15-20 pages in length – sufficient to provide a concise, yet complete account of your Lean Six Sigma project.
- Include an executive summary which clearly states the outcome of the project as well benefits to the organization/company that sponsored your work in the project. This information will also be captured in the Control Phase.
- Key process metrics before as well as after the improvement
- Include the project timeline – the start, duration and completion of the project and estimates of time spent in each phase of the DMAIC cycle

**SPECIAL NOTE:**

There are two designated storm days on the academic calendar—Saturday, January 31 and Tuesday, April 28 (reading day). We will use them if any cancelation for weather happens during the semester. Any storm day use COUNT as a regular class...Be aware