

POM150: INTRODUCTION TO SIX SIGMA FOR PROCESS IMPROVEMENT

COURSE SYLLABUS

Course Catalog: POM 150
Course Title: Introduction to Six Sigma for Process Improvement
Department: Department of Quantitative Methods and Information Technology
School: John Gokongwei School of Management
School Year: SY 2012-2013
Semester: Second
Credit: 3 Units

A. Course Description & Objective

Six Sigma is a Quality and Process Improvement methodology designed to reduce product or service failure rates to a minimum. Six Sigma leads business culture and requires a nearly flawless execution of business processes making it a high standard for companies to achieve. The Six Sigma process encompasses all aspects of a business, from management, production, service delivery to customer satisfaction. By the end of the semester, the student should be able to understand the Six Sigma methodology and its applications. This course may also serve as initial preparation for a Six Sigma certification.

B. Readings

Required Reading	<u>The Six Sigma Black Belt Handbook</u> by Thomas McCarty, Lorraine Daniels, Michael Bremer and Praveen Gupta, 2005
Supplementary Reading	<u>Six Sigma Quality Improvement with MINITAB</u> by Robin Henderson, 2006

C. Course Outline

I. Introduction to Six Sigma a. Definition and History b. Levels of Six Sigma c. Business Applications and Current Trends II. DMAIC Overview III. Project Management, Documentation and Presentations	Chapters 1,2,11

<p>IV. Phase 1: Define</p> <ul style="list-style-type: none"> a. Project Charter b. Voice of Customer 	<p>Chapter 12</p>
<p>V. Phase 2: Measure</p> <ul style="list-style-type: none"> a. Data Definition b. Data Collection Process c. Data Analysis <ul style="list-style-type: none"> i. Patterns Related to Time (Run Plots and SPC) ii. Patterns Not Related to Time (Histograms/ Multi-Variation Charts/ Pareto) iii. Use of Minitab d. Process Sigma and Analysis 	<p>Chapter 13</p>
<p>Mini- Project: Paper Helicopters (I) Midterm Test</p>	
<p>VI. Phase 3: Analyze</p> <ul style="list-style-type: none"> a. Identification of Potential Causes b. Verification of Potential Causes 	<p>Chapter 14</p>
<p>VII. Phase 4: Improve</p> <ul style="list-style-type: none"> a. Generation and Selection of Solutions b. Planning and Implementing Solutions c. Evaluating Results 	<p>Chapter 15</p>
<p>Mini- Project: Paper Helicopters (II)</p>	
<p>VIII. Phase 5: Control</p> <ul style="list-style-type: none"> a. Methods and Training b. Monitoring and Control c. Communication and Future Plans 	<p>Chapter 16</p>
<p>Finals Test Major Project and Presentation: Six Sigma Implementation for a Company</p>	

D. Course Requirements and Grade Equivalents

Mini-project, Homework, Class Participation	20%
Midterm Test	20%
Finals Test	20%
Major Project	40%
	100%

92 - 100	3.76 – 4.00	A	69 - 74	1.81 – 2.30	C
86 - 91	3.31 – 3.75	B+	60 - 68	1.00 – 1.80	D
82 - 85	2.81 – 3.30	B	Below 60	Below 1.00	F
75 - 81	2.31 – 2.80	C+			

The Group Project: Six Sigma Implementation

- The project involves implementing an actual Six Sigma project for a chosen company. Be sure you have contacts that will help you provide the necessary information and allow you to do at least a pilot test of your suggested improvement.
- Each group is required to submit partial project papers to serve as periodic updates of their progress in completing the project. These project papers will be graded.
- The final written paper should follow the format found in the project guidelines. There will be a project presentation at the end of the semester.
- Each student will be asked to force rank their group members at the end of the semester. Grades for group work will be adjusted upward or downward to account for each individual's relative contribution to the group effort.

E. Classroom Policies

Attendance:

1. Students are expected to attend all scheduled classes. Although it is a privilege to have a certain amount of cuts, this privilege comes with a certain amount of responsibility. It is up to the student to make up for all the missed lectures and class work due to his absence. Attendance will be checked.
2. Since this is a 3-unit course, students are allowed at most 9 hours worth of cut or 3 sessions. A late is equivalent to a cut. Going beyond this said norm will merit the student a final grade of W. There is no distinction between an excused and an unexcused absence.
3. Students are expected to adhere to the Dress Code set by the JG School of Management.
4. Assignments will be given occasionally. No late assignments will be accepted. No requests for extra work will be considered.
5. Long exams are to be taken as scheduled. A student who fails to take an exam for no justifiable reason automatically gets a grade of F for that particular exam.
6. Class participation is highly encouraged and is given appropriately significant weight in the computation of the Final Grade. Students are highly encouraged to contribute quality input into each class discussion.

Classroom Behavior:

1. Students are expected to behave in a manner that befits a student belonging to an academic institution.
2. Mobile phones and any other use of gadgets are strictly discouraged during class time. They are to be turned off or placed on silent mode.
3. Eating and drinking are not allowed inside the classroom.

F. Contact and Consultations

Consultations may be arranged with your teacher and is highly encouraged.

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