IT 480
Six Sigma Black Belt

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I. COURSE NUMBER AND TITLE: IT 480 Six Sigma Black Belt

II. PREREQUISITE:
IT470a and IT470b Six Sigma Green Belt

III. DESCRIPTION OF COURSE:
This course will continue to strengthen the knowledge areas learned in 6 Sigma Green Belt training along with focusing on advanced 6 Sigma techniques, leadership, team effectiveness and sustaining the gains (change management). The course will be structured around classroom study, small team activities, teachbacks and project work to demonstrate proficiency in the application of Six Sigma tools and techniques.


     Master Change, Maximize Success, Rebecca Potts and Jeanenne LaMarsh.
     ISBN 0811841707

     Recommended Reference material: (optional)
     CSSGB Primer (second edition) by the Quality Council of Indiana
     Six Sigma Memory Jogger II: A Pocket Guide by Michael Brassard or
     The Quality Toolbox, Second Edition by Nancy R. Tague
     (APA writing guidelines). There are also many websites to assist in writing to meet
     APA guidelines.

V. COURSE OBJECTIVES:
This course will provide the student the opportunity to further strengthen the foundation of the basics of Six Sigma techniques learned in the green belt course, tools and their application. It will cover the knowledge areas of six sigma black belt. Topics include review of green belt techniques and tools (DMAIC/DFSS), basics of 6 Sigma lean, VOC collection techniques, simulations, process management, team leadership/management/effectiveness, change management and advanced 6 Sigma
statistical analysis. The student will also gain skills in creating and delivering presentations based on the 6 Sigma findings.

VI. INSTRUCTIONAL FORMAT:

This is a weekend format two classes (Saturday and Sunday) for three alternating weekends. There will be classroom discussion with activities and teachbacks. Grading will include a written paper, exams and an applied project along with activity participation. The instructor will provide assistance and guidance as required.

VII. EVALUATION:

- Exam 1: Week 1 Materials (morning on 2nd Saturday) 15%
- Exam 2: Week 2 Materials (morning on 3rd Saturday) 15%
- Written Paper: (Afternoon, 2nd Sunday) 15%
- Class Activities 20%
- Applied Project (3rd Sunday) 25%
- Teachbacks/presentations 10%

Textbook Material:

Exams will be 20-30 multiple-choice/fill-in the blank questions selected directly from the text with 1-2 application essay questions. The topics will be covered in class discussions or activities. The exams will account for 30% of the student’s grade.

Written Paper:

A written paper covering the history of 6 Sigma including selecting at least one topic or area of interest to further investigate will be required. The written paper must have at least 3 non-web based references and written using the APA format guidelines. The paper should be a minimum of 5 pages in length not including the cover page or the reference page. The paper will cover 15% of the student’s grade.

Applied Project:

An applied project demonstrating the application of the black belt Six Sigma tool set will account for 25% of the grade. In order to ensure that students have the necessary flexibility to complete their projects two options will be made available for students: Option 1 – Complete an individual project. Option 2 – Complete a project in a class group not to exceed 3-4 members.

Project Guidelines:

It would be most beneficial if you or your group selected a project from green belt IT470a or IT470b to further develop. The focus of this project is to strengthen an existing project by creating a project plan, executive summary, implementation plan and a change management plan with fully developed supporting materials. If you do not have an existing project, it is recommended that you participate in a group so that the focus can be on effective team management and sustaining the gains of the recommended solutions of the project instead of the phases of DMAIC (which was covered in IT470a and IT470b). Additionally, certain aspects of this project may be embellished due to the educational nature -- the intent is to apply the tools and understand the use in a real world.
Teachbacks (homework)

There will be a presentation on a specific topic taken directly from the text. Students will be required to present their topic during the class session.

VIII. GRADING STANDARDS:

- A: 90-100%
- B: 80-89%
- C: 70-79%
- D: 60-69%
- F: <60%

IX. GRADING POLICY:

Missed exams have a 20% penalty (deducted from the final exam score) unless an appropriate, prior excuse is given to the instructor. The missed exam must be completed on the make-up date set by the instructor.

X. ACADEMIC CONDUCT:

Cheating on examinations, submitting work of other students as your own, or plagiarism in any form will result in penalties ranging from an F on the assignment to expulsion from the university, depending on the seriousness of the offense.

XI. ATTENDANCE:

It is expected that you will actively participate in all activities within the classroom or assigned to be completed outside of class. Additionally, full attendance is expected due to the content being provided in class to assist in the assigned activities, exams, and project work. If your group determines you are not actively contributing to the final deliverable, then it is expected the group will take this concern to the instructor. The instructor will discuss the concern with the student establish an action plan which may result in a loss of points for the particular project concerned. If more than 4 hours is missed within the classroom, the final grade will be deducted by 25% unless otherwise agreed upon by the instructor.

XI. INSTRUCTOR AVAILABILITY:

The best way to communicate with the instructor is by e-mail. The instructor is also available by phone if necessary. Students are encouraged to discuss problems as they arise, before they become major problems. The instructor will also periodically make his self available prior to or after class if you would prefer to meet face-to-face. Please try to schedule these sessions in advance.