

SYLLABUS
SOUTHERN ILLINOIS UNIVERSITY
IT470A Six Sigma Green Belt
Fall 2008 – Scott AFB, IL
8/22/2008

Instructor: Jesse Stevenson

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COURSE OBJECTIVE: This course will cover the knowledge areas of six sigma green belt. Topics include six sigma goal, lean principles, theory of constraints, design for six sigma, quality function deployment, failure mode and effects analysis, process management, team dynamics, project management basics, data and process analysis, probability and statistics, measurement system analysis, and process capability. Assigned class readings are required prior to attending class. Lectures will supplement, but not replace, assigned readings.

TEXTBOOK: CSSGB PRIMER, Quality Council of Indiana, www.qualitycouncil.com, 2006.

EVALUATION:

Exam 1	30%
Exam 2	30%
Quizzes	15%
Written Report	15%
Class Participation and Attendance	10%

GRADING STANDARDS:

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

GRADING POLICY: Missed exams have a 20% penalty 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.

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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.

COURSE REQUIREMENTS: There will be two non cumulative exams (exams will not cover multiple weekends); each exam will be worth 30%. The exams will consist of multiple-choice, fill in the blank and true and false questions. The material for the exams will come from the text, class lectures, films, and class discussion. Therefore, it is important for you to attend every class meeting in order to be prepared for each exam. The other 50% of your grade will come from 3 in class quizzes, class participation and attendance.

ATTENDANCE POLICY: Students are expected to attend all scheduled classes. Students who are absent or late are responsible for arranging to make up for missed materials. The instructor realizes that military duty sometimes interferes with class schedules and will not impose a penalty for late work if documentation is presented showing military duty as a reason for the lateness.

CLASSROOM ETIQUETTE: In order to make this a good learning experience for everyone, there are several rules regarding etiquette. First, **NO CELL PHONE USE IN CLASS**. The instructor realizes that students are working students, and military, and may have to be reachable. If you must be reached, ensure cell phones are on silent/vibrate, and if you receive a call, excuse yourself from the class and take the call. Second please make every effort to be on time. Third do not work on other class work during class.

INSTRUCTOR AVAILABILITY: Your instructor is available for conference and/or assistance immediately before, during and after scheduled class periods or at a mutually agreed upon time and place.

TOPIC SCHEDULE: The following is a tentative study/work sequence, tracking the text that the instructor plans to follow. Actual coverage per weekend may vary, but the student should be prepared ahead of time based on this schedule.

First Weekend (Aug 23rd and 24th, 2008)

Reading:

CSSGB PRIMER – Sections 1, 2 and 3
Section 1: Certification Overview
Section 2: Six Sigma Goals

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Section 3: Lean and Design for Six Sigma (DFSS)

Aug 23rd Concepts and Studies for Sections 2

Six Sigma Goals
Values of Six Sigma
Origins of Six Sigma
Organizational Drivers
Goals and Projects
Six Sigma Video

Aug 24th Concepts and Studies for Sections 3

Lean Principals and Lean Concepts
Lean Principles and Non-Value Added Activities
Theory of Constraints
DFSS – DFSS Roadmaps
DFSS – Quality Function Deployment (QFD) in Design
DFSS – Failure Mode and Effects Analysis (FMEA) Varieties

Exam 1 Saturday September 6th, and will cover sections 2 and 3

Second Weekend (Sep 6th and 7th, 2008)

Reading:

CSSGB PRIMER – Section 4 and 5

Section 4: Define: Teams & Customers
Section 5: Define: Projects, Tools & Results

Sep 6th Concepts and Studies Section 4

Process Management – Process Elements
Process Management – Owners and Stakeholders
Process Management – Identifying Customers
Process Management – Collecting Customer Data
Process Management – Analyzing Customer Data
Process Management – Translating Customer Requirements
Team Performance – Team Stages and Dynamics
Team Performance – Roles
Team Performance – Team Tools
Team Performance – Communications

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Sep 7th Concepts and Studies Section 5

Project Management – Project Charter
Project Management – Project Scope
Project Management – Project Metrics
Project Management – Project Planning Tools
Project Management – Project Documentation
Project Management – Project Risk Analysis
Management and Planning Tools
Business Results – Process Performance
Business Results – Failure Mode and Effects Analysis (FMEA)

Exam 2 Sunday September 21st, and will cover section 4, 5 and 6

Third Weekend (Sep 20th and 21st 2008)

Reading:

CSSGB PRIMER - Section 6

Section 6: Measure – Data & Process Analysis

Sep 20th and 21st Concepts and Studies Section 6

Process Analysis – Process Modeling
Process Analysis – Process Inputs and Outputs
Collecting Data – Types of Data
Collecting Data – Collection Methods
Collecting Data – Accuracy and Integrity
Collecting Data – Descriptive Statistics
Collecting Data – Graphical Methods

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Six Sigma Report (Written Report):

- Questions regarding report will be discussed during the 1st weekend
- Report is due at the end of weekend 3 (*report can be submitted early*)

Students are instructed to choose one of the 14 companies listed on page 11-5 of your CSSGB PRIMER.

- Your report will discuss how that company implemented Six Sigma
- Your report will discuss benefits as a result of implementing Six Sigma
- Your report will discuss challenges faced if any and how they were addressed

Other requirements:

- Cover page will include:
 - Name of company
 - Course
 - Instructor
 - Your Name
 - Date

Format of report

- Typed – 12pt, double spaced – 1” margins
- Number on each page after the title page
- Your report is limited to 3 pages, not including the title page
- You may use multiple sources, books, magazines, internet, news paper article(s), etc.
 - You must list the sources used for your report

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