

## UNIVERSITY OF WISCONSIN OSHKOSH

College of Business Administration

Bus 769, topics course -- Six Sigma Spring Semester 2010

Wednesday, 6:00PM - 9:10 PM, Classroom Swart 14

Professor Stan Strauss, CBBSS, CQE, CQA, CRE

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Program Assistant: Ms. Donna Molus, Clow Faculty 127, (920) 424-3027

Office Hours: Wednesday: 7:30 AM – 4:00 PM

Also by appointment.

Prerequisite: BUS 769Required Texts:

BUS 769 Course Slides (at D2L site).

"Implementing Six Sigma", Forrest W. Breyfogle III (ISBN 0-471-26572-1)" & "The Lean Six Sigma Pocket Toolbook", M. George, D. Rowland, M. Price, J. Makey (ISBN 0-07-144119-0)

Course Description

In today's Business world, Lean Six Sigma (LSS) focuses on *actions* driven by *motivated teams* producing *measurable bottom line savings*. The UW-O, MBA student will learn how to use LSS and aim it at bringing people together, focusing their abilities and driving out waste while driving in quality.

> The students will see how LSS does this by focusing on **Lean** projects aimed at a *vastly improved organization* of processes throughout all levels of their prospective organization. Once reorganized to a more profitable structure, each of their businesses would follow up with a strong implementation of **Six Sigma** tools used to *drive out variation* in each process by bringing it to an optimal performance level that even the operational experts never thought possible.

> In short, each student would gain a thorough understanding of the LSS concepts and tools needed to lead and/or participate in a business that has or desires a Lean Six Sigma foundation.

**Emphasis on Continuous Improvement as a Business Strategy**

We will explore the relationship between today's Businesses and their strategies concerning being "The Best". We will discuss the concepts of a Scheduled Continuous Improvement mentality. We will explain the underlying tone of the phrase; "when are we going to make **time**, to do something about the **time**, we have no **time** for". We will debate the philosophy of continuous improvement and how the concept of becoming a "World Class" company must be based on practicality vs. a Management directive or belief.

## Learning Objectives

At the end of this course, students will gain an understanding of:

### **Define Phase Module**

The Six Sigma DMAIC flow  
Six Sigma Project Selection  
Six Sigma Support Structure  
Financial Benefits to the Six Sigma Approach  
Process Improvements and SIPOC Model  
Listening to the Voice of the Customer  
Team Dynamics

### **Measure Phase Module**

Basic Investigative Tools (via Minitab)  
Flowcharting the Process  
Basic Statistical Process Control (SPC)  
Sampling  
Importance of Metrics  
Measurement System Analysis (MSA)

### **Analyze Phase Module**

#### **Analysis Tools**

Regression Analysis and Advanced Sampling  
Statistical Inference  
Comparison Testing: Variable  
Comparison Testing: Attribute

### **Improve Phase Module**

Creativity Concepts  
Failure Mode Effects Analysis (FMEA)  
Benchmarking  
Design of Experiments (DOE) Overview  
Design for Six sigma (DFSS) Introduction

### **Control Phase Module**

Control Planning through Control Plans  
Advanced Control Charting  
Lean Enterprise Concepts  
Executive Summary

**Note:** If you have need to contact me, my availability will run just prior to each class start time from 5:15PM to 6:00PM. My office phone number is 920-424-3484.

### Assessment

*American Society for Quality (ASQ)* has two certifications that would be good indicators for assessing the understanding of Lean Six Sigma content and practice. Certified Black Belt and Certified Green Belt. (Business 769) will provide most of the topics covered within these two certifications.

**Note:** If you have questions about grading, any concerns regarding your performance in the class, or any personal issues that you need to discuss with me, you must come in during office hours to talk to me. E-mail is NOT an effective way to discuss these issues.

### Course Evaluation

Source	Number	Points	Total Points
Quizzes	5	100 each	500
Total			500

- The quizzes will be posted on D2L after each phase of the DMAIC format.

The following grade scale will be used:

(%)	Grade
(93-100%)	A
(90-92.99%)	A-
(87-89.99%)	B+
(83-86.99%)	B
(80-82.99%)	B-
(77-79.99%)	C+
(73-76.99%)	C
(< 73%)	F (Failure)

**Note: I do not curve.**

### Classroom/Course Policies

#### **Exams and Quizzes:**

1. You may not use any study aids during the quizzes except for a calculator.
2. The quizzes will consist of multiple-choice questions, short answer questions, and problems selected from homework, readings, lecture, and class discussion. No

sharing of calculators is permitted during exams. Students are not allowed to leave the classroom during a quiz unless they are prepared to turn in their quiz before leaving.

### **Policy Regarding Makeup Exams/Quizzes and Late Assignments:**

- No makeup quizzes will be given or late assignments accepted unless the student provides valid documentation of a business meeting or illness to the instructor. Assignments are due at the beginning of class on the scheduled date. If you will miss an assignment or a quiz, you should contact me by telephone or e-mail prior to your absence if physically possible and then provide documentation to me upon your return to campus. In general, I accept the following types of excuses: (a) You must make an unscheduled visit to the doctor's office or hospital due to an unforeseen illness or injury, (b) You have to attend some type of memorial service for someone in your immediate family, or (c) You are required to attend a work function. Examples of excuses that would be unacceptable would include, but not be limited to, the following: (a) You have a job interview or (b) You did not have enough sleep the night prior to the date of the assignment or exam. I will analyze all excuses on a case-by-case basis. If the excuse cannot be documented, it is unacceptable. The format of makeup exams is at the instructor's discretion and will vary significantly from the regular exam given in class.

### **General Class Conduct Guidelines:**

- All quizzes will be reviewed briefly in class. During the review of a quiz, or assignment, you will not be permitted to take any notes or to write on the documents
- Students may ask questions about graded quizzes at the end of class. This allows me to provide you my undivided attention.
- Students are expected to complete reading assignments prior to class, to be prepared to discuss the material in class, and to participate in class discussions.
- Students are expected to listen attentively when the instructor or other students are speaking. Respect for others in class is of paramount importance.

### **Cheating and Plagiarism:**

- Students involved in cheating and plagiarism are subject to the maximum penalties permitted by the UW Oshkosh Student Discipline Code.

## References

Breyfogle, F. (2002). "Implementing Six Sigma,"

George, M., Rowlands, D., Price, M., Maxey, J. (2005). "Lean Six Sigma Pocket  
Toolbook