

# IT 480

## Six Sigma Black Belt

### Spring 2011

#### Catalog Description:

Study the knowledge areas of Six Sigma Black Belt. The purpose of this course is to provide the student with a comprehensive coverage of the techniques, tools, and applications of the methodology by the name "Six Sigma." Real-life data from manufacturing companies will be evaluated (when available) and analyzed for better understanding of the concepts to be learned in the course.

#### Course Objective:

This course will cover the knowledge areas of Six Sigma Black Belt. Topics include Analysis of Variance, Fractional Factorial Experiments, Taguchi robustness concepts, Response Surface Methodology, robust design and process, and other advanced six sigma principles and techniques.

#### Important Dates/Times:

Class meets Saturday and Sunday 3/19-20, 4/2-3, and 4/16-17 from 8:00am-4:30pm

Test 1 – Afternoon 3/20

Test 2 – Afternoon 4/3

Test 3 – Afternoon 4/17

#### Assessment Methods:

Grade scale 90/80/70/60

1. 3 Exams (25% each, all comprehensive) – no late test accepted
2. Homework/ project work/ research (25%) – no late work accepted
3. Class participation (attendance)

**Note: College policy on cheating and plagiarism will be adhered to.**

#### Topical Outline: (tentative)

Section VIII ANOVA and Section XI DFSS Test 1

Section II through VI Test 2

Section VII through X Test 3

#### Text and Supplies:

Required: CSSBB PRIMER, Quality Council of Indiana, [www.qualitycouncil.com](http://www.qualitycouncil.com), 2007, or latest.

Scientific calculator (must have average, standard deviation, etc)

Recommended: Access to Microsoft Excel or recent spreadsheet program

#### Class Layout:

Homework assignment – Q/A – Lecture – Exercise/Exam

#### Instructor:

Jim Akers Home: 815-877-1636 [jnakers@hotmail.com](mailto:jnakers@hotmail.com) (6-10pm M-F, 9am-10pm S-Su)

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#### Disclaimer:

Circumstances may require some changes to this syllabus.