

## QLT-102-DXND - Methods of Statistical Process Control (SPC) Spring 2009

### Catalog Description:

Methods of Statistical Process Control (SPC) presents basic statistical concepts, quality tools, common probability distributions, problem solving techniques, control charts for variable and attribute data, interpretation, Gage R&R, process capability analysis, and acceptance sampling. Instruction and lab exercises integrate management strategies, data planning, cross-functional project teams, and requirements of modern quality standards that lead to successful application of SPC.

Prerequisite: MTH 100, MTH 132, or MTH 125

Credit: Credits 3.00 CEUs Lecture: 2 Lab: 2

### Objective:

1. Provide a basic understanding to SPC
2. Present a management philosophy for the successful application of SPC
3. To give the student a solid foundation of SPC and its use
4. For the student to learn quality concepts and problem solving techniques of SPC

### Important Dates/Times

Class meets Tuesdays 1/13 through 5/5 5:00-8:30pm

College closed - No class 1/20

College closed - No class 3/10

Final exam Tuesday 5/12 3:45-5:45pm

Grades due Monday 5/18 12pm

### Assessment Methods:

Grade scale 90/80/70/60

1. 3 Exams (20% each), 1 Final (25%)
2. Homework or research (15%) – no late work accepted
3. Class participation (attendance)

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

### Topical Outline: (tentative)

Chapter 1

Chapter 2

Appendix A.1-.5

Chapter 3

Chapter 4 \_\_\_\_\_ Test 1

Chapter 5

Chapter 10

Chapter 6 \_\_\_\_\_ Test 2

Chapter 7

Chapter 8

Chapter 9

Chapter 11 \_\_\_\_\_ Test 3

**Text and Supplies:**

Required: Scientific calculator (must have average, standard deviation, etc)  
Statistical Process Control and Quality Improvement (5<sup>th</sup> edition or latest),  
Gerald M. Smith, ISBN 0-13-025563-7  
References of student's choosing

Recommended: The Memory Jogger, Goal-QPC, ISBN 1-879364-44-1  
Access to Microsoft Excel or recent spreadsheet program

**Class Layout:**

Homework assignment – Q/A – Lecture – Exercise

**Instructor:**

Jim Akers Work: 815-639-6454 [jakers@woodward.com](mailto:jakers@woodward.com) (8am-5pm M-F)  
Home: 815-877-1636 [jnakers@hotmail.com](mailto:jnakers@hotmail.com) (6-10pm M-F, 9am-10pm S-Su)  
<http://jimakers.com>  
No office hours, but you can call me at work, home, or setup an appointment.

**Notification of Services for Students with Disabilities**

"If you have a documented disability and would like to request accommodation and/or academic adjustments, contact the Disability Support Services Coordinator. You should contact the coordinator as soon as a need for accommodation is known so that implementation can occur as soon as possible. The telephone number for the coordinator's office is 921-2356."

**Disclaimer**

Circumstances may require some changes to this syllabus.