

STAT 414/514
Statistical Quality Control
Fall 2008

Instructor: Arthur Yeh, byeh@bgsu.edu

Classes: T 11:30 - 12:45@BAA 1011 and Th 11:30-12:45@BAA 2003

Office Hours: TTh 1:00 - 2:00 p.m. or other times by appointments, BA 344A, 372-8386.

Text: *Introduction to Statistical Quality Control* (6th Ed.) by D. C. Montgomery.

Software Package: *Minitab 15*.

Intended Coverage*

I. Preliminaries

1. Introduction (Ch. 1)
2. Modeling Process Quality (Ch. 3)
3. Inferences About Process Quality (Ch. 4)

II. On-Line Statistical Process Control and Monitoring

1. Methods and Philosophy (Ch. 5)
2. Univariate Control Charts for Variables (Ch. 6)
3. Univariate Control Charts for Attributes (Ch. 7)
4. Univariate CUSUM and EWMA Control Charts (Ch. 9)
5. Process and Measurement System Capability Analysis (Ch. 8)
6. Other SPC Techniques (Ch. 10)
7. Multivariate Control Charts (Ch. 11)
8. Engineering Process Control (Ch. 12)**

III. Acceptance Sampling

9. Lot-by-Lot Acceptance Sampling for Attributes (Ch. 15)

*Not all sections of each chapter will be covered in detail.

**These are optional topics, depending on time availability.

Grading Policy

| Assignment | Points |
|------------|-------------|
| Homework | $20n$ |
| Project | 100 |
| Case Study | 100 |
| Final Exam | 100 |
| | $300 + 20n$ |

1. The final letter grade will be determined by the total points accumulated over the semester. The grade distribution is based on the overall performance of the class.
2. No late homework assignment will be accepted without prior notification. However, a 20% deduction of the grade will be applied toward the late assignment.

Additional Notes

1. Students are **required** not only to attend class but to participate in classroom discussions. Students who miss classes are responsible for the materials covered in those missed classes.
2. I will put most of the handouts, homework assignments, data sets, additional reading material, case studies, project, etc, on the blackboard. Make sure you have a bgnnet account and you have access to blackboard.

3. I will also like to create some type of discussion board to serve as an extension to in-class discussion. The topics could range from what we talk about in class, or some real life cases pertinent to class, or anything having to do with class. The blackboard does have discussion board, however, I am not sure this is the best way to get everyone involved. There are other commercial sites which allow people to create some type of group or community within which the members can communicate with one another. We'll talk more about this on the first day of class to see what the preference is among students.