SIE 406/506 QUALITY ENGINEERING - Spring 2012
(Tuesday and Thursday 11:00 – 12:15pm, Aero & Mech Engr S212)

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Text: "Introduction to Statistical Quality Control", D. Montgomery, 6th edition.

Website: http://d2l.arizona.edu/

Temporary Lecture Schedule:

Lecture	Dates	Topics	References
1	01/12	Course overview + Introduction	Ch 1
2	01/17	Modeling Process Quality (MPQ)	Ch 2
3	01/19	MPQ + Inferences About Quality	Ch 2/3
4	01/24	Inferences About Quality	Ch 3
5	01/26	Inferences About Quality	Ch 3
6	01/31	Inferences About Quality	Ch 3
7	02/02	Methods and Philosophies	Ch 4
8	02/07	Methods and Philosophies	Ch 4
9	02/09	Quality Control Philosophies & Applications	Ch 4
10	02/14	Charting Variables	Ch 5
11	02/16	Charting Variables	Ch 5
12	02/21	Charting Variables	Ch 5
13	02/23	Implementing Charts + Charting Attribute	Ch 5+6
14	02/28	Charting Attribute	Ch 6
15	03/01	Charting Attribute + Review Session	Ch 6
16	03/06	CUSUM	Ch 8
17	**03/08**	**Exam 1**	
18	03/15	Spring Recess	
19	03/17	Spring Recess	
20	03/20	CUSUM+EWMA	Ch8
21	03/22	EWMA	Ch8
22	03/27	Short Production Runs	Ch9-1
23	03/29	SPC with Autocorrelated Data	Ch9-4
24	04/03	Process Capability	Ch 7
25	04/05	Process Capability	Ch 7
26	04/10	Gage R&R	Ch 7
27	04/12	Specification/Tolerances	Ch 7
28	04/17	Acceptance Sampling	Ch 14
29	04/19	Acceptance Sampling	Ch 14
30	04/24	Multivariate SPC	Ch 10
31	04/26	Multivariate SPC	Ch 10
32	05/01	Review Session	
33	**05/10**	**Exam 2**	

The above topics and schedule are subject to change. Revisions in the syllabus may occur as the semester progresses.

Homework:

The homework will be assigned on Thursdays and due on the following Thursday, *before the end of the class*. NO late submission is allowed unless it is requested and approved by the instructor in advance (e-mail or phone-call received *before* the date the assignment is due). You are encouraged to discuss homework problems with fellow students. But your final product should be based on your own understanding. Copying other's work is not acceptable.

Examinations:

Exam 1: March 08, Thursday
Exam 2: May 10, Thursday

Makeup examinations MUST be requested at least one week prior to the date the exam is held. In case of medical or other personal/family emergencies, a formal excuse (doctor's note, etc.) is required.

Grading:	Homework	20%
	Exam 1	35%
	Exam 2	45%
	There is no extra credit for any student	

Course Outcomes:

1 Develop a control chart for monitoring continuous and discrete quality characteristics.
2 Design acceptance sampling plans.
3 Assess statistical process capability.
4 Implement CUSUM and EWMA charts.
5 Establish specific plan for short production run.
6 Examine multivariate process control charts.
7 Assess product specifications and tolerances.