IE 6270
Engineering Experimental Design
Fall 2006

General Information

Instructor:  Dr. Kai Yang
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Office hours:  3-5:00 pm., Mondays

Course Objectives:

This course covers design of experiments for manufacturing process and product
design as well as related data analysis issues. The contents will include:

- Analysis of variance
- Factorial design
- Randomized design, Latin squares
- Confounding and fractional factorial design
- Response surface experiments
- Mixture experiments
- Experiments with random factors
- Space-filling experimental design
- Nonlinear modeling

Required Material
Text Book  Design and Analysis of Experiment, 6th Edition,
by Douglas Montgomery, John Wiley & Sons, 2001

Prerequisites
IE 322 or IE 425, or consent of instructor

Grading policy:

Homework:  20%
Midterm:  40%
Final Exam:  40%
## Tentative Schedule and Contents

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Midterm Exam: October 20, 2005, 5:30-7:30

Final Examination will be in Dec. 18, 2003, 5:30-7:30 pm
Exam and quiz policies:
Open text book and course lecture notes only. Do not bring any other notes, homework and other books. Bring pen/pencil, eraser, and calculator. Absolutely NO PC/Laptop, cell phones during the examination period. If any un-authorized material is found during the exam, it is considered to be cheating and corresponding rules will apply.

Homework policy: Homework will be assigned at about twice for every 3 weeks and problems are selected from textbook. Due date is usually a week after the assignment. Detailed requirement will be given at each assignment.

Late work policy:
Exams: No makeup exams will be given.
Homework: 25% reduction per 24 hours. Only sickness, business trip and important family events (marriage, baby birth etc) can be excused from that reduction.

Attendance policy
Students are required to attend class every time. I believe that also serves the students’ best interests. Of course, students may be absent because of sickness, business trips, important family activities. However, if persistent or significant attendance problem occurs. I may take attendance as part of grade consideration.

Policy on withdrawal and Incomplete:
Failing is not an acceptable excuse for withdrawal.
Failing is also not an acceptable excuse to asking and ‘I’ grade.
Substantial quantities of work has to be completed before an ‘I’ grade is given.
Substantial quantities of work means:
1. >70% of required grade
2. No need to attend more classes
3. No more homework assignments are needed

Cheating policy
1. What is cheating?
   a) Getting unauthorized help in exam, project and homework, b) Referencing or using unauthorized material, c) Other cheating activities.
2. Penalty
   a) A failing grade will be issued, b) further penalty may be taken by the University Judicial Officer.