

**22S:158**  
**Experimental Design and Analysis**  
Spring 2007  
MWF 2:30-3:20 131 Schaeffer Hall

**Instructor:**

Rhonda DeCook  
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**Office Hours:**

Wednesday 3:30pm - 4:30pm  
Thursday 10:00am - 11:30am

**Department:**

Statistics and Actuarial Science  
Luke Tierney, Chair  
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335-0712

**Textbook:**

*Design and Analysis of Experiments*. Sixth edition by Douglas C. Montgomery

**Course goals and objectives:**

In this course we will learn the basics of experimental design and statistical analysis of data obtained from a number of experimental designs using SAS.

**Grading Policy:**

Assessment in this course will be based on the following three components:

- **Homework (20%)** - Homework will be assigned on a regular basis. Usually, each homework will be assigned on a Friday and due the next Friday at the beginning of class. If there are extenuating circumstances, I will accept a late homework, but it will receive 50% credit.
- **Quizzes (10%)** - There will be a few in-class quizzes during the semester. The dates may not be announced, but you will be able to consult your notes during the quizzes.
- **Exams (70%)** - There will be 2 midterm exams and a final exam:  
Midterms (20% each) will be given in class on February 23 and April 6th.  
The Final (30%) will be given on Thursday, May 10 from 2:15-4:15.

## Tentative Class Schedule:

<u>Week</u>	<u>Topic</u>	<u>Chapter</u>
1	Intro/Review	1 & 2 plus notes
2	Paired & 2-Group Experiments	2
3	1-way ANOVA	3
4	1-way ANOVA/RCBD	3 & 4
5	Latin Square/BIBD/Factorial Designs	4 & 5
6	Factorial Designs	5
7	Blocking in Factorials/ $2^k$ Factorials	5 & 6
8	$2^k$ Factorials	6
	–Spring Break–	
9	Confounding and Blocking in $2^k$ Factorials	7
10	Confounding $2^k$ Factorial in $2^p$ Blocks	7
11	Fractional Factorials/Random Effects	8 & 13
12	Nested/Split-plot Designs	14
13	3-level Factorials/Regression	9 & 10
14	ANCOVA	15
15	To be announced	

### Resources for additional help:

Supplementary materials, such as handouts, will be distributed during class. If you miss class, please inquire if any materials were handed out. The Department of Statistics and Actuarial Science maintains a list of private tutors. See <http://www.stat.uiowa.edu/courses/tutors.html>.

**Students with disabilities:** I would like to hear from anyone who has a disability which may require some modification of seating, testing, or other class requirements so that appropriate arrangements may be made. Please see me about this as soon as possible.

**Students complaints concerning faculty actions and Academic misconduct:** university policies regarding academic misconduct and student complaints concerning faculty actions can be found at [http://www.clas.uiowa.edu/students/academic\\_handbook/](http://www.clas.uiowa.edu/students/academic_handbook/).