

STAT 402A STATISTICAL DESIGN AND THE ANALYSIS OF EXPERIMENTS SPRING 2004

Location: Physics 3

Time: 8:00-8:50 a.m. MWF

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Hours: 9:00-10:30 a.m. Monday, Wednesday, and Friday or by appointment

Text: *Design of Experiments: Statistical Principles of Research Design and Analysis* (2nd Edition),
R.O. Kuehl, Duxbury Press

Purpose:

This section of Statistics 402 is designed primarily for graduate students in agriculture and biological sciences who are preparing to design and analyze their own experiments. There are two primary purposes of the course:

1. To help students understand the fundamental principles of experimental design, and
2. To help students learn to analyze data from a variety of designed experiments.

Prerequisites:

Statistics 401 is a prerequisite for Statistics 402.

Grading:

Homework	25%	
Exam 1	20%	Friday, February 13, 8:00-8:50 a.m.
Exam 2	20%	Friday, March 26, 8:00-8:50 a.m.
Final Exam	35%	Tuesday, May 4, 7:30-9:30 a.m.

On exam days, be sure to arrive early with a calculator and pen or pencil. No make-up exams will be given unless circumstances are exceptional. Your final course percentage will be determined by the formula

$$\text{Course Percentage} = 0.25HW + 0.20E_1 + 0.20E_2 + 0.35F$$

where HW , E_1 , E_2 , and F represent the percentage correct on Homework, Exam 1, Exam 2, and the Final Exam, respectively. Below is a rough grading scale that may be made more lenient to compensate for difficult homework and/or exams.

Course %	100-93	92-90	89-87	86-83	82-80	79-77	76-73	72-70	69-67	66-63	62-60	59-0
Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F

All students have the opportunity to earn good grades in Statistics 402 by learning the course material well. Please let your instructor know of any difficulties as soon as possible.

If a student has a disability that qualifies under the Americans with Disabilities Act and Section 504 of the Rehabilitation Act and requires accommodations, he/she should contact the Disability Resources (DR) office for information on appropriate policies and procedures. DR is located on the main floor of the Student Services Building, Room 1076. Their phone number is 515-294-6624.

Intended Coverage

Chapter	Topic
1	Basic Research Design Principles
2	Completely Randomized Designs
3	Treatment Comparisons
4	Examining Model Appropriateness
5	Variance Components
6	Factorial Designs
7	Mixed Models
8	Randomized Complete Block Designs and Latin Squares
9-11	Incomplete Block Designs
14	Split-Plot Designs
15	Repeated Measures Designs

Some Homework Guidelines

- The purpose of all homework assignments in Stat 402 is to help you learn the course material.
- All homework assignments are posted at <http://www.public.iastate.edu/~dnett/S402/hw.shtml>.
- Homework is usually due each Wednesday at the beginning of class. Due dates are posted on the Web site and written on the homework documents.
- No late homework is accepted, but your lowest homework score will not be used to compute your grade.
- Answers to homework assignments should be neatly written or typed and well organized with no extraneous information and no attached computer output.
- You are encouraged to work with other students on homework problems. You must, however, write your own answers to the questions. Copying another's work is prohibited.