

Statistics 512 – Spring, 2009

Experimental Design and Data Analysis for Researchers II

Instructor Information:

Lecturer: Dr. Phillip Chapman
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Class Information:

Location: A206 Clark
Lecture/Rec: 8:00 – 9:50 Monday and Wednesday (Recitation will be combined with lecture). We will take a 10 min break at 9:00 and begin the second hour with HW questions and discussion.
Office Hours: Dr. Chapman's office hours:
Monday 10:00-10:50 a.m.
Tuesday 3:00-4:00 p.m.
Wednesdays 10:00-10:50 a.m.
Thursdays 2:00-3:00 p.m.
Zonglin's office hours to be arranged after his class schedule is set.
Or by appointment. Students are encouraged to send questions by e-mail.

Prerequisite: ST511 or consent of instructor.

Objectives:

This course is a continuation of ST511. Topics this term will be Multiple Regression and Design of Experiments. Emphasis throughout will be on the principles of design and inference, rather than the mechanics of the computations. Data analysis will be performed using the computer package SAS, except when hand calculation appears instructive. The class presentation will follow approximately the order of the chapters in the text. The three major topics are: (1) Multiple Regression, (2) Fixed-effects factorial designs, and (3) Random and mixed-effect factorial designs. The material in the text will be supplemented by additional topics and computer package instruction.

Course Materials:

Required Text: Ott, R. Lyman and Longnecker, Michael, *An Introduction to Statistical Methods and Data Analysis, Fifth Edition*, PWS-Kent Publishing Company, 2001.

Required Course Notes: Course notes and examples will be posted on RamCT in pdf format. Students are **required** to print out a copy of the notes and examples prior to class and **bring them to class**.

Computing:

SAS is available on PC's in the Statistics side (Room 206 Weber) of the College of Natural Sciences computer classroom. Students will receive a class account and password (one account for the entire class) to use these computers. However, **students are encouraged to use SAS on their department or home computers**. Copies of SAS can be leased through RamTech in the Lory Student Center. The current version of SAS is 9.2.

Course resources will be administered by RamCT, which can be accessed through any computer running Firefox or Internet Explorer.

Video lectures:

ST512 is being offered through CSU's distance education program (enrollment is about 12 this semester). Links to the video lectures will be posted on RamCT shortly after class. (The videos were designed for viewing in Internet Explorer and sometimes do not work correctly in Firefox.) The cost of the video lectures is that you have to speak loudly when asking questions and remind the lecturer to repeat questions, as needed, so that the distance students can hear them. The video lectures allow you to review material presented in class and facilitate professional travel that takes you away from campus. The purpose of the videos is not to allow you to sleep late.

Homework:

Homework will be assigned weekly (except during test weeks) and due in class on Wednesday of the following week **or** in the instructor's box in 200 Statistics until 4:00 p.m. Friday. **Homework should be organized so that the grader can find your answers without searching through pages of computer output.** Cut and paste computer output into your assignment, when appropriate. **You are encouraged to work together on homework, but the work turned in should be your own. Individuals in study groups should each write the SAS program and construct the homework document; do not just produce one homework document and submit multiple copies with different names.**

Grading:

	% of grade	Comments – (all dates are tentative)
Weekly homework	10%	Lowest grade dropped
Two 2-hour exams	30% each	Feb 25 (week 6) and April 8 (week 11)
Final exam	30%	Wednesday, May 13 (11:20 a.m.-1:20 p.m.)

Course Policies:

Homework/exam grading disputes: See the grader for homework grading problems and your lecturer for exam grading problems.

Late homework: No credit unless prior permission.

Exam conflicts: Prior permission and arrangement only.