

EX ST 802
Statistical Methods II
Fall 2007

Instructor: J. Rieck
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Office Hrs: By appointment

Class Hrs: EX ST 802.001 TTH 9:30 - 10:45 A.M. 413 Daniel Hall

Course Objectives:

Upon successful completion of this course, students should be able to:

- (1) summarize and interpret data,
- (2) draw appropriate conclusions and inferences from data,
- (3) develop an understanding of several different statistical techniques including when and how to apply these techniques.
- (4) develop an appreciation for experiment designs and when to employ a certain design,
- (5) demonstrate a familiarity with using computers and statistical computing packages, and
- (6) demonstrate an awareness of the power and capability of statistical software to aid in performing statistical analyses.

Attendance

1. College work proceeds at such a pace that regular attendance is necessary for each student to obtain maximum benefits for instruction. Regular and punctual attendance at all class and laboratory sessions is a student obligation, and each student is responsible for all the work, including test and written work, in all class and laboratory sessions.
2. **Avoid being late for class. It is disruptive to both the class and me.**
3. In the event that the professor is late for class, students are required to wait ten minutes before leaving.

Disability access statement

“It is University policy to provide, on a flexible and individualized basis, reasonable accommodations to students who have disabilities. Students are encouraged to contact Student Disability Services to discuss their individual needs for accommodation.”

Academic Integrity

“As members of the Clemson University community, we have inherited Thomas Green Clemson’s vision of this institution as a ‘high seminary of learning.’ Fundamental to this vision is a mutual commitment to truthfulness, honor, and responsibility, without which we cannot earn the trust and respect of others. Furthermore, we recognize that academic dishonesty detracts from the value of a Clemson degree. Therefore, we shall not tolerate lying, cheating, or stealing in any form.”

Web Site

Material for the course can be found at <http://people.clemson.edu/~jrieck>
Please print and bring to class two days of material.

Email

It may be necessary for me to get in touch with you concerning the course. If you do not use your student email address, please forward your email to the desired address. If you do not know how to forward your email, please call the Help Desk (656-3434) to assist you.

Homework

Homeworks are due on Tuesdays. No homework will be accepted after 12 p.m. Friday of the week the homework is due.

HOMEWORK GUIDELINE

Please remember for all homework papers to be handed in for this course: the consistent guideline is to hand only as much SAS code as will show that you did the computations correctly using SAS, and only as much output, edited into a coherent narrative where narrative and explanations are requested, as is needed to answer the questions asked and to justify the sequence of steps and conclusions you have made. **You will be graded down for handing in lots of extraneous material !**

Evaluation:

There will be three projects with oral presentations for this course. Each project will be 25% of your grade and the homework average is 25% of your grade.

Grading:

90.00 - 100 A
80.00 - 89.99 B
70.00 - 79.99 C
Below 70.00 F

Course Schedule/Assignments		
Topic	DATE	TOPICS
1	Aug. 23	Introduction to regression
1	Aug. 28	Polynomial regression vs. transformations
2	Aug. 30	Model building using theory
2	Sept. 4	Empirical model building
3	Sept. 6	Influence statistics
3	Sept. 11	Nonlinear regression
4	Sept. 13	Analysis of covariance
4	Sept. 18	Additional topics on regression
5	Sept. 20	Introduction to experimental design
	Sept. 25	Presentations of regression projects
5	Sept. 27	Power and sample size determination
6	Oct. 2	One treatment factor designs
6	Oct. 4	Multiple comparisons and linear contrasts
7	Oct. 9	Factorial treatment structures
8	Oct. 11	Nested designs
8	Oct. 16	Split-plot designs
8	Oct. 18	Repeated measure designs
8	Oct. 23	Additional designs topics
9	Oct. 25	Nonparametric statistics

	Oct. 30	Presentations of experimental design projects
9	Nov. 1	Nonparametric statistics
10	Nov. 6	One and two proportions
10	Nov. 8	Frequency tables
10	Nov. 13	Log-linear models
10	Nov. 15	Logistic regression
11	Nov. 20	No class
	Nov. 22	Thanksgiving Break
11	Nov. 27	Logistic regression
12	Nov. 29	Principle component analysis
12	Dec. 4	Cluster analysis
12	Dec. 6	Additional topics on multivariate analysis
	Dec. 8	6:30-9:30 Presentation of categorical or multivariate projects