STAT 516, Statistical Methods II -- Spring 2007

Instructor:
David Hitchcock, assistant professor of statistics
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Course Web Page: http://www.stat.sc.edu/~hitchcock/stat516.html

Classes:
Meeting Times:
MWF 9:05 AM-9:55AM, LeConte College, Room 210A

Office Hours:
Mon 10:00-10:50, Tue 1:30-2:30, Wed 10:00-10:50, Thu 11:00-12:00.
Please feel free to make appointments to see me at other times.

Textbook:
Statistical Methods, Second Edition, by R.J. Freund and W. J. Wilson, Academic Press, 2002.

Purpose: To complete a basic two course sequence (in conjunction with STAT 515 or 509) in statistical techniques available to the general practitioner for analyzing experimental data. To introduce students in many different disciplines to multiple regression and analysis of variance for basic experimental designs. To provide students with the knowledge to implement and interpret these standard linear models.

Prerequisite: Grade of C or higher in STAT 515 or STAT 509 or equivalent.

Course Outline: Chapters 6 – 11 of the Freund & Wilson textbook. Topics covered include: Simple and multiple linear regression, analysis of variance for basic designs, multiple comparisons, random effects, and analysis of covariance. Statistical packages such as SAS.

Homework:
Homework exercises from the textbook are assigned on the course web page. Due dates are given on the course web page. Late homework will be penalized.

You must do each homework problem independently. You may ask me for help on the homework problems. If homework is found to have been copied, all students involved will receive a 0.

Everyone is expected to do every problem. Please write up homework papers neatly and clearly. Many problems on the exams will be similar to homework problems.

Exams:
There will be two in-class midterm exams and a final exam on Thursday, May 3 - 2:00 p.m. Exams may not normally be made up, except in extreme circumstances, for which written documentation of excuse (doctor's note, funeral notice, etc.) is required. If you suspect you may miss an exam day, it is important to contact me well in advance of the test date.

Grading:
The course grade will be based on homework/quizzes (20%), 2 midterm exams (25% each), and a final exam (30%). A course average of 90-100 will result in an A, 87-89 a B+, 80-86 a B, etc. Those taking STAT 516 for graduate or honors credit will do a small project involving the analysis of real data. For these students, this will count as one-fourth of the homework/quiz portion of the course grade.

Computing:
Some problems in this course involve significant computations, and for these, we will learn to use the software package SAS. You will have an account on the MATHSTAT domain. Currently the computers in LC 124, LC 303A and PSC 102 have SAS. Student copies of SAS for home use are also available for purchase; for information, call Barbara Koski (803-777-4657) at USC Computer Services (corner of Blossom and Sumter).

It is not assumed that you have much previous experience with SAS. In many industries and jobs, SAS is the standard statistical computing package used, and this course will introduce you to some of the most common SAS procedures.

Tentative Course Schedule: MWF, January 17 through April 30, except:
No class (MLK Day): January 15 (Monday)
No class (Spring Break): March 12, 14, 16 (Monday, Wednesday, Friday)

Wednesday, Feb. 21 (tentative): Exam 1
Friday, March 30 (tentative): Exam 2
Thursday, May 3 (2:00 p.m.): final exam

** Homework Due Dates will be posted on the course web page with each homework assignment.