University of Minnesota
Course Information for Stat 8311, Linear Models
MW 3–4:45, B10 Ford Hall
Fall Semester, 2002

General Information
The instructor is S. Weisberg, 362 Ford Hall, 625-8355. Office Hours: MW 1:45–2:45. At other times, I can be reached via email at sandy@stat.umn.edu or in my St. Paul office, 146H ClaOff, 625-8777. The TA is Yu-Min Huang.

The class meets twice a week for 105 minutes per meeting. I intend to divide each class into two fifty-minute segments with a five minute break in the middle. One fifty-minute segment each week will be a lab, where we will discuss problems and computing.

Content and prerequisites
This course is a revision of the linear models course offered as part of the core Ph.D. program in the School of Statistics. The desirable prerequisites for the course are: (1) a year of mathematical statistics at the 5xxx level or higher; (2) courses in regression analysis and experimental design at the 5xxx level or higher, and (3) a course in linear algebra at the undergraduate level or higher.

Text

As a review of linear algebra, the recommended book is James R. Schott (1997), Matrix Analysis for Statistics. This book is very expensive, but worth owning; however, it is not required.

Class homepage
http://www.stat.umn.edu/~sandy/courses/8311. Homework assignments will be sent to you via email, and will be posted on the homepage.

Homework
There will be frequent homework assignments, and we will go over solutions to homework problems in class approximately every other week. Homework will then be collected and graded. Students may be asked to present solutions on the board for the class.
Grading

There will be two exams, a midterm (30%) and a final (50%). Format of the exams will be announced shortly. Homework counts for 20% of the course grade.

Computing

While the emphasis in this course is on theory, not application, you will have data problems assigned most weeks that will require using a computer package. Computing will be done using R with the package lme for mixed models and the function glmPQL in the MASS package for generalized linear mixed models. R is available on the School Linux network, and can be downloaded for your own PC or Macintosh for free. If you prefer, you can use SAS Proc Mixed and Nlmixed in place of these programs.


Schedule changes

This course is scheduled to meet on MW from 3-4:45, but there are a few changes. All classes will meet in B10 Ford Hall.

<table>
<thead>
<tr>
<th>Schedule Changes</th>
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<tbody>
<tr>
<td>Cancelled class</td>
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<tr>
<td>1 Monday, September 16</td>
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<td>2 Wednesday, October 17</td>
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<td>3 Wednesday, November 27</td>
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First Homework Assignment

Due Wednesday, September 11. Be prepared to discuss and do the problems: Chapter 1, E1.1, E1.2, E1.4, E1.5, E1.6.

This material is available in alternative formats upon request. Please contact Dana Tinsley, School of Statistics, Ford 313, 625-7300.