

STAT 540: Data Analysis and Regression

Fall 2002

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Office Hours : Mondays, 3–4 p.m. and Wednesdays, 4–6 p.m.

Objectives

This course will introduce students to multiple regression, ANOVA, and data analysis. The main emphasis will be on applications of the linear model to data from diverse areas of scientific research. Students will learn graphical and computational methods for data analysis, and the course will provide background for later study of the theory of linear models. Emphasis will also be given to effective communication of statistical results.

Course materials and Computing

Textbook: The book *Applied Linear Statistical Models* (Fourth Edition) by Neter, Kutner, Nachtsheim, and Wasserman, is required.

Class web page: All homework assignments, handouts, and other information will be available on the course web page (www.stat.colostate.edu/~jah/teach/st540).

S-plus: The S-plus statistical package will be used in this course. See the class web page for online references for S-plus. If you prefer a book, I recommend the book *Modern Applied Statistics with S-Plus*, by Ripley and Venables.

To access S-plus:

- Weber lab: A Windows version of S-plus is available in the Statistics/Mathematics Computer Laboratory in Weber 205 and 206. For lab hours and other information see class web page.
- Statistics graduate students: S-plus is available on all Statistics Department computers (Unix and Windows).
- Free download of Splus for students available at <http://elms03.e-academy.com/splus/>

Course work

Homework: Homework will be assigned approximately every week. Assignments will be available on the class web page.

Exams: There will be two midterms and a final exam for the class. Details given later.

Grade Breakdown: Homework (25%), midterm 1 (20%), midterm 2 (25%), final exam (30%).

Course Policies

1. Late homework: No credit.
2. Exam conflicts: Prior permission and arrangement only.
3. I encourage discussion of homework in broad, conceptual terms where one student is trying to educate another without giving away the answer, but **all work turned in must be your own**. For example, each student must write his/her own programs in entirety.
4. The minimum discipline prescribed by the Department of Statistics for cheating: the student receives a zero for the assignment, exam, or project. Cheating includes representing the ideas of anybody except yourself as your own ideas.