

Fall, 2005

## Statistics 410

### Introduction to Regression and Statistical Computing

Instructor: David W. Scott

Office: Duncan Hall 2095 713-348-6037

Office Hours: MW 1:30-3:00 Appt. or drop by  
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Tuesday/Thursday: 9:25-10:40

Keck Hall Room KH-101

Labbie: Roberto Bertolusso

Help Sessions: Monday Keck Hall 101 5:30–6:30 (7:00) p.m.

**General:** The course will be an applied/theoretical view of regression and linear models, with stronger emphasis on intuition and the applied. We will move towards problem definition and solving through software such as S-Plus, R, and SAS on OwlNet or your microcomputer. The goal is to ensure your ability to correctly design and formulate an experiment, organize and explore the measured data, to use statistical packages, and to write custom functions to analyze and report your findings. Data and other information will be found at [www.stat.rice.edu/~scottdw/stat410/](http://www.stat.rice.edu/~scottdw/stat410/). An introductory probability/statistics background such as Stat 310 or equivalent will be assumed. But you can easily pick up much of that material as needed.

**Software:** Splus on OwlNet/PC; R from <http://www.r-project.org/>

**Grading:** The course will consist of lectures accompanied by homeworks and projects. Many of the projects will be performed in small groups, involving computing and data analysis efforts; high quality written reports (printed output including figures) will be expected when indicated. There will be a mid-term exam, but in lieu of a final exam, there will be a final project worth slightly more than others.

HW/Projects (50%); Exam(s) (30%); Final Project (20%).

#### Texts:

Kutner, Nachtsheim, Neter, & Li (5th edition), *Applied Linear Statistical Models*, McGraw-Hill/Irwin.

Venables and Ripley, *Modern Applied Statistics with S*, Springer.