

Statistics 213  
STATISTICAL MODELING  
Spring 2017

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775-6045

Goal:

The goal of this course is to change the way you view and experience the world by developing within you statistical reasoning skill.

Text and Software:

The text is *STAT2: Building Models for a World of Data*, by Cannon et al. For software we will use the statistical package R, specifically the implementation RStudio. (Regular R is also available, for free, at <http://www.r-project.org/>)

Course Outline:

We will begin with a review of material (Chapter 0 in the text) that you should know from your first statistics course. Then we will spend many weeks on Theme A: Regression. After that, I expect to spend a couple of weeks on Theme C: Logistic Regression and to end the semester with a couple of weeks on Theme B: Analysis of Variance. The final will be comprehensive. Note that this is a *statistics* course. We will concentrate on statistical ideas and will use the computer as an invaluable tool. As with STAT 113 (or whatever first course in statistics you took), you will find the mathematics in this course to be rather easy. I hope that you find the statistical ideas to be powerful and useful.

Office Hours: 10-11 MWF, 1:30-2:20 MW

Note: During office hours I will almost certainly be in or near my office. I am usually in my office between 9 and 5:30, except when I am in class or at a meeting; *you should feel free to drop in and see me at any time*. You only need an appointment if you want to guarantee that I will be in at a time other than an office hour.

Blackboard:

We will use the course management system Blackboard (Bb) as a means of organizing and distributing materials for the course. You will want to check Bb regularly. I'll post PowerPoint slides and announcements there.

Computing:

Each of you will work on a computer throughout many class sessions. We will use the open-source computer package R, which has become the standard tool among professional statisticians. You will find the R is extremely powerful; I hope to make it easy for you to use.

Homework:

I will assign homework from the text, via Bb, at the end of most class meetings, but only some of it will be collected, again via Bb, and graded. All homework is due on the announced date at the beginning of class. The Mathematics Department policy is to not accept late work.

Exams/Projects/Grades:

We will have two midterm exams and a comprehensive final. We will also have some data analysis projects throughout the semester, each of which summarizes a unit of material. The exams are worth 100 points each. You may bring a 3x5 card with notes written on both sides to each exam. The final is worth 150 points; the projects are worth about 30 points each; homework is worth 80 points. Course grades are based on total points earned.

Exam Schedule:

- Exam 1 Friday 10 March (tentative)
- Exam 2 Friday, 14 April (tentative)
- Final Thursday, 11 May 7:00 pm (definite)