Course Information

Time and Location: Tues 8:30 – 10:25 a.m. (per. 2–3) 100 Griffin-Floyd Hall (FLO)
Thur 9:35 – 10:25 a.m. (per. 3)

Instructor: Dr. Brett Presnell

Office: 225 FLO E-mail: presnell@stat.ufl.edu
Office Hours: See instructor’s web page. Phone: 273-2989
Web Page: http://www.stat.ufl.edu/~presnell/


Course Web Page: http://www.stat.ufl.edu/~presnell/Courses/sta4504-2012sp/

Teaching Assistants: Mr. Antonio Linero and Ms. Trang Nguyen

Contact information and office hours for the TAs will be provided on the course web page. The TAs will be available to answer questions about homework during their office hours. Homework exercises will also be graded by the TA.

Prerequisites: Familiarity with basic statistical methods, as covered in courses such as STA 3024, STA 3032, STA 4210, STA 4322, STA 6127, or STA 6167. (If you have not had one of these specific courses, you will need the instructor’s permission to take this course.) Much of this course deals with extensions of regression modeling to handle categorical response variables, so students should be comfortable with multiple regression modeling, including the use of dummy variables for incorporating categorical predictors in a model, and should have had practice using statistical software for regression and ANOVA.

Course Content and Objectives

Description and inference for binomial and multinomial observations using proportions and odds ratios; multi-way contingency tables; generalized linear models for discrete data; logistic regression for binary responses; multi-category logit models for nominal and ordinal responses; inference for matched-pairs and correlated clustered data; loglinear models.

The student is expected to learn when these methods may be applied, how to apply them, and how to properly interpret the results.
Grading

There will be two exams in the course, given on the following dates:

Exam 1 Thursday, February 23 (tentative)
Exam 2 Tuesday, April 24

The second exam is not cumulative, except to the extent that the material in the second half of the course necessarily depends on that from the first half.

There will also be regular homework assignments. Students are permitted to work together in understanding the course material and completing the homework, but they must write up their solutions individually (no copying of answers or computer code). Any supporting computer output must be submitted with the homework. No homework will be accepted after its due date and any homework not turned in on time will receive a grade of zero, but the lowest homework grade will be dropped when calculating the course grade.

Each exam will account for a third of the course grade, and homework will account for the remaining third.

Software and Computing

It will be necessary to use a computer and a statistical software package to do most of the homework assignments. I will do all the computations for the course using R. To quote the R homepage (http://www.r-project.org/):

R is a free software environment for statistical computing and graphics. It compiles and runs on a wide variety of UNIX platforms, Windows and MacOS.

The course web page will have an R section that gathers useful information about R, including instructions for downloading and installing R on Windows, MacOS, and Linux. R code and data will also be provided in the notes, on the course web pages, and in an R package being developed for the course.

Other software (e.g., SAS, JMP, SPSS, or Stata) can be used to do homework if you wish. SAS code is available for most of the examples in the text, and a link to this code will be provided on the course web page. Nevertheless, students are encouraged to use R in this course and should not expect help from the instructor or the TAs with any other statistical software.