

STAT 442: Statistical Methods for Categorical Data
Winter 2008: Term I

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Lectures: Tuesday, Thursday, 8:00-9:20am

Pre-requisite: STAT 306 or equivalent

Text: Analyzing Categorical Data, Jeffrey S. Simonoff (available in the bookstore or on-line through library)

Computing: Exercises will require the use of appropriate software. In lectures examples will be based on the use of R, which is freely available (see www.R-project.org).

Evaluation:

Assignments	25%
Two Midterms (weeks 6 and 10)	20% each
Final Exam	35%

Course Outline:

This course covers methods for analysing discrete response variables, including counts and nominal (or qualitative) variables.

Topics (timetable is tentative):

Week	Topics	Reading in Simonoff
1	Introduction, Review of basic concepts	Chapters 1-3
2	Binomial variables	Ch. 4, Sect. 4.1
3	Multinomial, Poisson variables	Sect. 4.2-4.3
4	Assessing model fit	Ch. 4, Sect. 4.4-4.5
5-6	Regression models for count data	Sect. 5.1-5.2
7	Two-by-Two Tables	Sect. 6.1
8	Loglinear models	Sect. 6.2-6.3
9	Tables with special structure	Sect. 7.1-7.2
10	Multidimensional Tables	Sect. 8.1-8.2
11	Binary logistic Regression	Sect. 9.1
12	(ctd.)	Sect. 9.2-9.4
13	(ctd.)	Sect. 9.5