

BIOS 6244

Analysis of Categorical Data

Biostatistics Program

LSUHSC School of Public Health

Course Director:

Instructor:	Stephen Looney, PhD
Title:	Professor and Director
Department:	Biostatistics Program
Address:	11888 Longridge Ave. Apt. 1007 Baton Rouge, LA 70816-8900
Office Phone:	225/292-0475 (effective 9/30/05)
Cell Phone:	504/450-7184
Email:	nega_ginge@yahoo.com

Required Texts

A. Agresti. *An Introduction to Categorical Data Analysis*. John Wiley & Sons, 1996.

M. E. Stokes, C. S. Davis, G. G. Koch. *Categorical Data Analysis Using the SAS System*, 2nd ed. SAS Institute, 2001.

Content Outline, Course Calendar, and Reading Assignments

[Note: All reading assignments are in Agresti (1996)]

Weeks 1-5 (August 22-24, September 26-October 19)

- I. Introduction (pp. 1-8, 257-265)
- II. Inference for a Single Proportion (pp. 8-12)
- III. Inference for Two-Way Contingency Tables (pp. 16-45)
 - A. Comparing Proportions in Two-by-Two Tables
 - B. The Odds Ratio
 - C. Chi-square Tests of Independence
 - D. Tests of Independence for Ordinal Data
 - E. Exact Inference
 - F. Sample Size Considerations

Week 6 (October 24-26)

- IV. Three-Way Contingency Tables (pp. 53-64)
 - A. Partial Association
 - B. Mantel-Haenszel Methods

Weeks 7-10 (October 31-November 21)

- V. Generalized Linear Models for Binary Data (pp. 71-80)
 - A. Poisson Regression (pp. 80-87)
 - B. Logistic Regression (pp. 103-110, 111-117, 122-135)
 - C. Logit Models (pp. 118-121, 162-167)
 - D. Log-linear Models (pp. 145-158)
 - E. Diagnostics and Model-Checking (covered in page numbers above)
 - F. Sample Size Considerations (covered in page numbers above)

Week 11 (November 28-30)

- VI. Analysis of Matched-Pairs Data
 - A. Comparing Dependent Proportions (pp. 226-233)
 - B. Comparing Marginal Distributions (pp. 239-241)
 - C. Analyzing Rater Agreement (pp. 242-246)