

**BIOST/EPI 536 LEARNING OBJECTIVES
CATEGORICAL DATA ANALYSIS IN EPIDEMIOLOGY
AUTUMN 2005**

Upon entering this course, you are expected to have completed courses in introductory statistics or biostatistics, multiple regression, and categorical and censored survival data analysis. You should understand the basic statistical concepts of sampling variation, parameter estimation and statistical hypothesis tests. You should know how to fit multiple linear regression models, how to interpret regression coefficients in multiple linear regression models and how to perform hypothesis tests about regression coefficients. You should be familiar with case-control, cross-sectional and cohort study designs. You should know how to use simple statistical techniques for analyzing data from the binomial distribution including odds ratio estimation in 2 x 2 tables and series of 2 x 2 tables, the Mantel-Haenszel test, and tests about the odds ratio from 2 x K tables including tests for heterogeneity and tests for linear trend and departure from linear trend.

After successfully completing this course, you can ordinarily expect to be able to:

1. Fit appropriate logistic regression models to data from epidemiologic case-control studies using STATA and evaluate the fit of these models.
2. Interpret regression coefficients from logistic regression models fit to case-control data and test hypotheses about them.
3. Explain when logistic regression methods should be replaced by conditional logistic regression methods.
4. Present results of analyses using logistic regression to readers who are not familiar with logistic regression.