Math 542A – Categorical Data Analysis

Binomial, multinomial and Poisson distributions.
Likelihood function, maximum likelihood estimation for categorical models
Wald, Likelihood ratio and score tests and confidence intervals. Clopper-Pearson confidence interval.
Poisson, Binomial and multinomial sampling.
Contingency tables: Chi-square test, Fisher's exact test. Partial tables, conditional and marginal independence, odds ratios, relative risk. Measures of association for categorical data, homogenous association, ordinal trend.
Loglinear models for contingency tables.

Recommended Textbook