# Hunter College of The City University of New York

## STAT 752 Analysis of Categorical Data 3 hrs, 3 cr.

**Prerequisite:** C or better in STAT 614 or STAT 750 or BIOS 750, or an equivalent statistics course.

#### **Required Readings**

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Alan Agresti An Introduction to Categorical Data Analysis. New York: Wiley Series in Probability and Statistics, 1996

#### **Recommended Readings**

Articles from various health-related journals

## **Course Objectives and Content**

Week 1	Categorical response data, Sampling models, Inference for proportion	
Week 2	Two-way contingency tables: Comparing proportions, Odds-ratio	
Week 3	Two-way contingency tables: Chi-squared test, Testing independence for ordinal data, Exact inference for small samples	
Week 4	Three-way contingency tables: Partial association, Cochran-Mantel-Haenszel methods	
Week 5	Logistic regression: Interpretation, inference, and model checking	
Week 6	Logistic regression: Logit models for qualitative predictors, multiple logistic regression	
Week 7	Computer Lab 1	
Week 8	Log-linear models and inference	
Week 9	Association graphs, collapsibility and confounding; ordinal associations	
Week 10	Logistic regression for matched-pairs, analyzing rater agreement	
Week 11	Multiple observations: Marginal models	
Week 12	Multiple observations: Conditional models	
Week 13	Computer Lab 2	
Week 14	Correspondence analysis and robust methods	
Week 15	Review of case studies	

# **Method of Evaluation**

Grades will be assigned according to the following distribution:

Type of Assignment	% of Final Grade
5 Take-Home Projects	100%