

# Categorical Data Analysis (3)

(Effective Spring 2019)

- Prerequisite:** Math 251, and Stat 325 or Engr 311.
- Catalog Description:** Analysis of categorical data. Contingency tables, exact tests, loglinear models, analyses involving ordinal variables, binary response models, and multinomial response models.
- Goal:** Prepare the students majoring in the mathematical sciences for careers involving Statistics.
- Learning Outcomes for Major:** This course addresses one or more of the student learning outcomes for the major. Upon completion of his/her degree from the University of Tennessee at Martin with a major in mathematics, the graduate will be able to:
- i. apply mathematical concepts and principles to perform numerical and symbolic computations.
  - ii. use technology appropriately to investigate and solve mathematical and statistical problems.
  - iii. write clear and precise proofs.
  - iv. communicate effectively in both written and oral form.
  - v. demonstrate the ability to read and learn mathematics and/or statistics independently.
- Teaching Objectives:** The student will:
1. Study distributions for categorical data.
  2. Describe and make statistical inferences for Contingency tables.
  3. Learn Different Models for Categorical Data such as Generalized Linear, logit, logistic, loglinear and matched pairs models.
- Text(s):** An Introduction to Categorical Data Analysis, Third Edition, A. Agresti, Wiley, 2018. ISBN-13: 978-1119593409.
- Disability Services:** The University of Tennessee provides reasonable accommodations (academic adjustments and auxiliary aids) to ensure equal access to educational content and university programs for students with disabilities. Any student eligible for and requesting accommodations due to a disability must provide instructors with a letter of accommodation from Disability Services. For additional information, please contact the Disability Services office at 209 Clement Hall, (731) 881-7605.