Bus 215/NRS 215  Applied Statistics

Instructor:  David Grothen

Contact Information
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Credits:  3

Course Description:
  An introductory course in statistical procedures with applications to business and health care. Topics include: statistics, the binomial and normal distributions, sampling, hypothesis testing, estimation, correlations, contingency tables, one-way analysis of variance, and linear regression. Upon completing this class, students will be able to: 1) collect a set of data, identify the sampling method used, and recognize potential bias, 2) describe a data set with tabular, graphical, and numerical methods, 3) test various hypotheses and construct confidence intervals, 4) scrutinize and interpret results and draw meaningful conclusions, and 5) present the data and results in a way that is concise, visually appealing and provides information to the reader.

Intended Audience:  Students completing and undergraduate degree.

Required Text:

Course Objectives:
At the conclusion of the course, students will be able to:
  1. Collect a data set, analyze the sampling method used, determine appropriateness and reliability, and recognize potential bias.
  2. Describe a data set with tabular, graphical, and numerical methods.
  3. Test various hypotheses and construct confidence intervals.
  4. Analyze, evaluate, and interpret results.
  5. Present data and results in a way that is concise, visually appealing, and imparts information to the reader.

Attendance:
  3 or more absences will result in a failing grade for this course.
Grading:

25% of your grade will be 7 homework assignments
50% of your grade will be 7 quizzes
25% of your grade will be the final project

Academic Integrity:

The Doane College Academic Integrity Policy will be strictly adhered to in this class. Any violation of this policy will result in a failing grade.

Late Work:

The due dates assigned in class will strictly be adhered to. Failure to meet any deadline will result in a reduction of points for that assessment. There will be a 25% reduction for work that is one week late. A 50% reduction will be assessed for work that is 2 weeks late. Work will not be accepted for work that is more than 2 weeks late.

Course Schedule:

Session 1: Introduction / Sampling
Session 2: Quiz, Displaying Data
Session 3: Quiz, Measures of Center and Measures of Dispersion
Session 4: Quiz, The Normal Curve & Probability
Session 5: Quiz, z-scores & Probability using the Normal Curve
Session 6: Quiz, Confidence and t-tests
Session 7: Quiz, Hypothesis Tests
Session 8: Quiz, Correlation, Project Due

Project:

A detailed set of instructions for the project will be handed out at the second class.