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 an undergraduate degree.

Required Text:
   Even You Can Learn Statistics by David M. Levine and David F.
   The second or third edition of this book is acceptable.

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.