## Doane University
## BUS 215/NRS 215 Applied Statistics

Instructor:     Jeff Lang
Telephone:   402-680-8180 (Home)
Email:          jeff.lang@doane.edu
Credit:          3 hours

Class meets each Wednesday at the Omaha campus.  Class meeting time is 6:00-10:00pm.

## Course Overview

This course examines selected concepts needed to develop sound judgment about data analysis and the appropriate use of statistics.  The course prepares students to interpret and critically analyze the results of business and health care research.

Course Objectives
After this course the student will be able to:
1.  Use information technology (such as statistical software) to analyze outcomes
     in a variety of settings.
2.  Demonstrate critical thinking abilities when analyzing data for program development
     and evaluation.
3.  Determine appropriate statistical procedures for use in a variety of research designs.
4.  Summarize and present data.

## Textbooks

*The newest version of this text is the sixth edition but an older version will work and is much
        cheaper.

Pyrczak, F. (2004). **Success at Statistics: A worktext with humor**, 3rd edition, Pyrczak
        Publishing: Glendale, CA.

## Course Requirements

1)  **Participation:**  This statistics course covers a great deal of material.  Participation in class discussions/activities will greatly enhance student learning.  Students may miss only one class during the eight week session excluding the exams. Homework may be turned in prior to the class missed.  A short, weekly **quiz** will be administered with the points contributing to your overall participation grade.  I expect that class attendance will not be a problem.  Should a situation arise, you must contact me as soon as possible.
2)  **Exams:**  There will be two exams during this session with the final exam covering all topic areas.  Each exam will last approximately one hour.

3) **Assignments:** Weekly assignments will be assigned and graded. The purpose of the weekly assignments is to prepare students for each class as well as the weekly quiz. Students will be responsible in completing the assignments outside of class.

## Evaluation

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|---|---|
| Final Exam | 40% |
| Midterm | 30% |
| Quizzes | 20% |
| Assignments | 10% |

## Class Schedule

| Dates | Topics | Assigned Chapters |
|---|---|---|
| Session 1 | Statistics Overview & Organizing and Displaying Data (histograms and frequency polygrams) | Basic math review pg. 399, 2,7&8 |
| Session 2 | Univariate Descriptive Statistics (descriptive vs. inferential, scales of measurement, central tendency, variability, standard scores, normal curve) | 1,3,4,5,6, |
| Session 3 | Univariate continued | 9-18 |
| Session 4 | Statistical Inference (sampling, probability, confidence intervals, hypothesis testing, z test, and one-tail vs. two-tail tests) | 27-36 |
| Session 5 | **Midterm** Correlation & Nonparametric Techniques | 19-26 & 48-50 |
| Session 6 | T-Tests: Between Group Mean Differences | 36-40 |
| Session 7 | ANOVA & Review | 41,45,&46 |
| Session 8 | **Final Exam** | |

## Grading Scale

| A+ | 97% + | B+ 87-89% | C+ 77-79% | D+ 67-69% |
|---|---|---|---|---|
| A | 93-97% | B  83-86% | C  73-76% | D  63-66% |
| A- | 90-92% | B- 80-82% | C- 70-72% | D- 60-62% |

## Statement of Academic Integrity

The instructor will follow the Doane College policy on Academic integrity which states: *The Doane College Academic Integrigty Policy will be adhered to in this class. All projects and tests will represent your own work. Any use of others' ideas and words without proper citation of*

*sources is plagiarism and will result in penalties to be determined by the instructor and/or the dean of graduate studies.* **The penalty for violation of this policy is an "F" in the course.**

## Electronic Communication

All course communication between the instructor and students must be through the use of your Doane email address.  If you send the instructor anything via another email address, it will not be accepted.

Cell phones should be turned off during class.