

**HED/KIN 575 – STATISTICAL DESIGN**  
Sam Houston State University  
College of Education and Applied Science  
Department of Health and Kinesiology  
Spring 2008

- Instructor:** Martha Bass  
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Office hours: as posted
- Text/Readings:** Salkind, NJ. (2004) *Statistics for People Who(Think They) Hate Statistics* (2<sup>nd</sup> edition). Thousand Oaks, CA: Sage Publications.
- Course Description:** This course is a study of statistical techniques and measurement theory with emphasis upon their application to Health, Kinesiology, and related areas.
- Objectives:**
1. Become familiar with the statistical vocabulary necessary for reading and interpreting research.
  2. Increase knowledge of statistical procedures used in analyzing data and reporting research.
  3. Be able to use a statistical computer package (SPSS) to perform statistical analysis.
  4. Be able to describe, interpret, and report statistical results.
  5. To become statistically literate and be able to evaluate the appropriateness of fundamental statistical results reported in research journal articles.
  6. To become an effective consumer of research information.
- Course Format:** Course format includes whole class and small group discussions and computer time for analyzing data. Evaluation consists of regular examinations, individual assignments, and class participation.
- Course Content:**
- I. Variables, measurement, scales
  - II. Measures of central tendency
    - A. Mean
    - B. Median
    - C. Mode
  - III. Measures of variability
    - A. Range
    - B. Variance
    - C. Standard deviation
  - IV. Charting your data
  - V. Correlation

- VI. Hypothesis testing
- VII. Normal Curve
  - A. z scores
- V. Significance
- VI. T-tests
- VII. ANOVA
- VIII. Prediction
- IX. Chi-Square
- X. Reliability and Validity
- XI. MANOVA

**Course Requirements:**

1. Attendance – see attendance policy
2. Homework assignments – assignments for a chapter will be due the class period after we have covered that chapter in class. Each assignment will be graded on a 20-point scale. Late assignments will have a 20% penalty.
3. Exams – There will be 2 mid term exams and one final exam. Each exam will have two parts: a multiple-choice and essay/problem solving in-class portion and a take-home essay/problem-solving portion (requiring SPSS). You are allowed to use a calculator during the in-class exam. Collaboration with other students and the use of “expert” opinion is not acceptable during either part of the exam.

**Evaluation:**

2 midterm exams (200 points each)	400 points
1 final exam	100 points
10 homework assignments (20 points each)	200 points
<b>Total</b>	<b>700 points</b>

- A = 90% and above
- B = 80% - 89%
- C = 70% - 79%
- D = 60% - 69%
- F = < 60%

**Attendance:**

If you are going to miss class, contact a classmate in advance to pick up class handouts.

**Disability Statement:**

It is the policy of Sam Houston State University that no otherwise qualified disabled individual shall, solely by reason of his/her handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any academic or Student Life program or activity. Disabled students may request help with academically related problems stemming from individual disabilities from their instructors, school/department chair, or by contacting the Chair of the Committee for Continuing Assistance for Disabled Students and Director of the Counseling Center, Lee Drain Annex, or by calling (936) 294-1720.