

Statistics and Evaluation - KINE 394
Fall 2017/MWF 10:00-10:50; Blow Hall, room 332

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Course Description

This course is designed to familiarize the student with the techniques of measurement, evaluation and statistics in the related fields of Health Sciences, and Exercise Science. In addition, the student will gain an understanding of the design, analysis, and reporting of research.

Objectives

The successful completion of this course will enable the student to:

1. understand the role of evaluation in teaching, allied health, or the research process.
2. demonstrate an understanding of fundamental statistical procedures: central tendency, variability, correlation, t-tests, analysis of variance, and regression.
3. demonstrate an appreciation of the proper use and role of statistics in the analysis and evaluation of information.
4. use calculators and personal computers for data analysis and scoring assessments.

Course Evaluation

The student's final grade will be based as follows:

Exam #1 = 25%

Exam #2 = 25%

Final Exam (comprehensive) = 40%

Homework = 10%

Required Textbook

Statistics in Kinesiology, 4th edition, Vincent, W.J. and Weir, J.P., Human Kinetics (2012).

Schedule of Lecture Topics

1. Introduction, Measurement and Evaluation in Physical Education, Exercise Science and Allied Health
2. Statistical Approach to Measurement, Evaluation, and Research
 - a. measurement, statistics, and research (ch 1, delete “validity” pp.10-12)
 - b. organizing and displaying scores (ch. 2)
 - c. measures of central tendency (ch. 4)
 - d. measures of variability (ch. 5)
 - e. percentile scores and other standard scores (ch 3)
 - f. normal curve and sampling error (ch. 6)

Exam #1

- g. t-Test (ch. 10)
- h. analysis of variance - ANOVA (ch. 11, 12)
- i. correlation and regression (ch. 8)
- j. non-parametric analyses (ch. 16)

Exam #2

3. Reliability and Objectivity (ch. 13)
4. Validity
5. Evaluating Achievement
6. Evaluating Knowledge

Final Exam (comprehensive)

USE FORMULAS PROVIDED IN CLASS, NOT THOSE FOUND IN TEXTBOOK!!!!!!