

## KINS 7150

### Research Methods in Kinesiology

#### Course Description

Application of research to exercise science, physical education, and sport management/studies with experience in developing techniques of analyzing and reporting data.

#### Instructor Information

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office hours: almost any time not in class

#### Purpose

The purpose of this course is to provide an overview of research methods, and descriptive and experimental research designs in order to prepare students to conduct and read research.

#### Objectives

At the conclusion of the course the student should be able to:

1. Discuss the purpose of research in kinesiology.
2. Identify and define a research problem, including the associated hypothesis to be tested, and limitations, delimitations, and underlying assumptions.
3. Describe the scientific method and the elements of the research process.
4. Discuss the importance of reviewing the literature in identifying and developing a research problem; use a computer to search available data bases to obtain published literature.
5. Demonstrate an understanding of selected basic statistical concepts. Given appropriate data, calculate basic statistics using available computer software for calculating fundamental statistics. Correctly interpret basic descriptive and inferential statistics.
6. Define objectivity, reliability, and validity, and discuss their importance in research. Describe how they are assessed.
7. Describe and discuss the strengths and weaknesses of typical descriptive, quasi-experimental and experimental designs used in kinesiology research, including the major threats to internal and external validity.

8. Discuss factors that affect the sensitivity of an experiment, including statistical power.
9. Evaluate the strengths and weaknesses of exercise science research published in peer-reviewed journals.
10. Describe the format and main components of a scientific, peer-reviewed manuscript and thesis or dissertation.
11. Discuss ethical issues in research including honesty in collection, authorship, and representation of data and safe, respectful treatment of participants.

### Evaluation

#### 1. Criteria

- A. Tests (3): 90% (45 points possible) [Make-up tests possible with excuse]
- B. Projects (5): 10% (5 points possible)

#### 2. Standards

- A. A = 80% of total points [12-15 points on a test; 40-50 total points]
- B. B = 70% of total points [10.5 points on a test; 35-39 total points]
- C. C = 60% of total points [9-10 points on a test; 30-34 total points]
- D. D = less than 60% of total points [0-8 points on a test; 0-29 total points]
- I. Failure to complete all exams and projects
- W. Withdraw from the class by the instructor for excessive number of unexcused absences from class

### Projects

See the Projects sheet in the course packet.

### Attendance Policy

Things do occur so the student must miss class and getting to class on time is difficult on this campus if the student must go any distance between classes. However, the student must make an effort to attend class regularly and be on time to class. Not attending class regularly will detract from the education and grade of the student as well as establish a poor image of the student with the professor. **NOTE**, sometimes roll will be taken in class. More than four unexcused absences is grounds for the instructor withdrawing you from the class (grade of W or WF) (see grading standards in this handout). In the University of Georgia Graduate Bulletin is the following statement: Students are expected to attend classes regularly. A student who incurs an excessive number of absences may be withdrawn from a class at the discretion of the professor.

### Honesty Policy

Students in this course are expected to conform to the University Honor Code and Academic Honesty Policy. All academic work must meet the standards contained in “A Culture of Honesty.” Students are responsible for informing themselves about those standards before performing any academic work. Academic honesty means performing all academic work without plagiarism, cheating, lying, tampering, stealing, receiving unauthorized or illegitimate assistance from any other person, or using any sources of information that is not common knowledge. Students who assist other students in academically dishonest acts are in violation of the policy. Consequences of academic dishonesty may vary from receiving a lower grade to expulsion from the University. **Particularly in this course, doing computer projects with any assistance (data entry, SPSS directions, etc.) from another student is academic dishonesty.** A Culture of Honesty may be viewed at the following web site:  
<http://www.uga.edu/ovpi/honesty/academic.htm>

#### Suggested Textbooks

1. Required: Baumgartner and Hensley (2006). Conducting and Reading Research in Health and Human Performance, 4th ed., McGraw-Hill.
2. Required: Course packet at a copy service
3. Thomas, Nelson, and Silverman. (2005). Research Methods in Physical Activity, 5<sup>th</sup> ed., Human Kinetics.
4. Neutens and Rubinson. (2001). Research Techniques for the Health Sciences, 3rd ed., Benjamin Cummings.
5. Huck. (2004). Reading Statistics and Research, 4th ed., Allyn & Bacon.

#### Disclaimer

The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.

## TOPICS FOR THE SEMESTER

<u>Topic</u>	<u>Estimated # of Days</u>	<u>Topic Content &amp; Reading</u>
01	2	Nature and Purpose of Research, Chapter 1
02	2	Research Process, Chapter 2
03	2	Reviewing the Literature, Chapter 3
04	3	Research Plan, Chapter 4
05	1	Ethical Concerns in Research, Chapter 5
06	2	Sampling, Etc., Chapter 6
07	2	Reading and Evaluation Research Reports, Chapter 7
<b>Test 1</b>	1	Test 1
08	2	Experimental Research, Chapter 8
09	2	Experimental Design, Chapter 8 and handouts
10	2	Factors Affecting Research Design, handouts
11	2	Descriptive Research, Chapter 9
12	2	Qualitative Research, Meta-Analysis, Chapters 10 & 11
13	3	Additional Research, Chapter 12
<b>Test 2</b>	1	Test 2
14	3	Basic Statistical Concepts & Methods, Chapter 13
15	5	Inferential Statistical Methods, Chapter 14
16	2	Measurement Issues in Research, Chapter 15
17	1	Computer Printout Review, <u>bring your printouts</u>
18	2	Research Proposal, Writing Research Reports, Chapters 16 & 17
19	1	Research Article Critique, assigned readings
<b>Test 3</b>	1	Test 3, during final exam period