

KINE 7010 - RESEARCH METHODS IN PHYSICAL ACTIVITY (3 cr.)

Lecture: M - F, 8:00 – 9:30 AM (May 20 – June 25)

Instructor

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Office hours: Mon. – Thurs., 10 – 11 AM. Other times by appointment.

Course Description

Review, analysis, and interpretation of available research with emphasis on designing new research to meet changing needs. The study of research methods and critical analysis of research literature specifically applied to the areas of motor performance, physical education, exercise science, health promotion, and sport.

Objectives

Upon completion of this course, students will understand:

1. How to apply scientific thinking through the analytical study of research literature;
2. How to locate and use the professional and physical resources available for research at Auburn University;
3. Specific philosophical issues related to the nature of graduate study in the physical activity sub-disciplines;
4. How to develop a specific research problem in their area of specialization.

Required Textbook and Materials

Thomas, J.R., Nelson, J.K., & Silverman, S. J. (2005). *Research methods in physical activity (5th ed.)*. Champaign, IL: Human Kinetics.

Supplemental Readings – These will be made available through Blackboard.

Forscher, B.K. (1963, October 18). Chaos in the brickyard. *Science*, 142 (3590), 339.

Barnett, B. (1992, June 3). Teaching and research are inescapably incompatible. *The Chronicle of Higher Education*.

Siedentop, D. (1987). Going public: Quality control in graduate education. *Quest*, 39, 82–87.

Questions based on these readings will appear on the final exam. Check schedule for dates these articles will be discussed.

Assignments and Evaluation

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| 1. | 50 pts. = | <u>Final Exam</u> | June 25 |
| 2. | 20 pts. = | <u>Library Assignment</u> | Prepare an annotated bibliography on a research topic (details in separate handout). |

3. 30 pts. = Research Abstracts Five 100-175 word abstracts based on “**Research Notes**” published in the *Research Quarterly for Exercise and Sport*, 2006 – 2010.

<u>Component</u>		<u>Final Letter Grade</u>
Final Exam –	50 pts.	90 – 100 = A
Abstracts –	30 pts.	80 – 89.9 = B
Library –	<u>20 pts.</u>	70 – 79.9 = C
Total Points	100	60 – 69.9 = D
		Under 60 = F

Class Policy Statements

Attendance. It is expected that students taking a graduate class will attend every class meeting, will arrive on time, and will actively participate in each class. Absences and late arrivals will not be tolerated. If you must miss class because of illness or other emergency, please try to notify the instructor in advance. You are still responsible for any work missed during an absence.

Plagiarism. There are no group assignments or projects in this course. All exams, research abstracts, library assignment, faculty biographies, and any other written work must reflect the individual efforts of each student. Please refer to the *Tiger Cub* for information regarding academic honesty.

Cell Phones. As a courtesy to everyone, please turn off your cell phone during class. If you have a compelling reason for leaving your phone on, please let me know at the beginning of class. Also, please do not text–message during class.

Best Work. Students are expected to show evidence of thorough reading of assigned textbook chapters and supplemental readings. Please take pride in your work and be motivated to do your best work in this class; if you are, you will gain the maximum benefit from the course.

Disability Accommodations. Students who need accommodations are asked to arrange a meeting during office hours the first week of classes, or as soon as possible if accommodations are needed immediately. If you have a conflict with my office hours, an alternate time can be arranged. To set up this meeting, please contact me by E–mail. Bring a copy of your Accommodation Memo and an Instructor Verification Form to the meeting. If you do not have an Accommodation Memo but need accommodations, make an appointment with **The Program for Students with Disabilities**, 1228 Haley Center, 844–2096.

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Research Abstract Assignments (30 pts.)

According to the “Editor's Viewpoint” (*Research Quarterly for Exercise and Sport*, March, 1986) a Research Note is a valuable contribution to the study of human movement, but one which fails to meet the complete definition of a regular paper. Examples of the types of reports that are classified as Research Notes include (1) replications of previous work, (2) test development, (3) equipment development, (4) computer programs, (5) profile evaluations, (6) brief communications, (7) re-analysis of previously reported data, (8) verification of original documents of major importance to the field, and (9) short interesting items of scientific value. For the purposes of KINE 7010, the important characteristic of Research Notes is the absence of an abstract. You will write an abstract for five Research Notes published in the *RQES* within the past 5 years (2006–2010).

Abstract – An abstract can be defined as a summary of the information in a document. It enables readers to identify the basic content of a paper quickly and accurately, to determine its relevance to their interests, and thus to decide whether they need to read the entire paper.

Guidelines – Your abstract length should be a minimum of 100 words and a maximum of 175 words. The abstract should include a statement of the purpose or principal objectives of the study, a **brief** description of the methods, a summary of the main findings (you do not need to cite specific statistical tests that were used, or include statistical outcomes or data), and a statement of the principal conclusion(s), if any. Before you write your first abstract, please examine several from regular articles in the *RQES*, or other refereed journals in your field, to see how they were written. Try to model your abstract after these examples.

Typing Instructions – Put your name in the top right-hand corner of the page. Skip 2 lines and provide the American Psychological Association (APA, 6th Ed., 2010) citation for the article (authors, year, title of article, *Research Quarterly for Exercise and Sport*, volume number, inclusive pages. This may be typed single-spaced). Skip 2 lines and type the word **Abstract** centered on the page. Skip 2 lines and then type your abstract as one double-spaced paragraph, beginning flush left. Use complete, grammatically correct sentences. Check your spelling, and proofread your work. Provide a word count at the bottom of the page. Most word-processing programs can do an automatic word count for you.

Write the abstract as if **you were the author** of the article. Therefore, it is not plagiarism if you copy information word-for-word from the article. Remember, you wrote it; it's your article. Now, you simply have to write the abstract for it.

Due dates

Abstract #1 (2006)	–	May 28
Abstract #2 (2007)	–	June 4
Abstract #3 (2008)	–	June 14
Abstract #4 (2009)	–	June 18
Abstract #5 (2010)	–	June 23

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Library Assignment (20 pts.)

Purpose: To assist the graduate student in learning to use computerized data bases, indices, abstracts, and other materials in the Auburn University library for locating research literature.

Due: By June 23, 2010

Select **one** topic from the list below and, using the library online search tools and databases, submit an **annotated bibliography** containing **five** (5) books, or chapters from edited books, **ten** (10) refereed journal articles, and **one** (1) dissertation on the topic.

An annotation is typically **one concise sentence** describing the subject content of the item being described. Refer to the *Publication Manual of the American Psychological Association* (6th ed., 2010) for instructions on format for typing the reference citations. There are copies in the library, as well as in the Learning Resources Center (LRC) in Haley Center, 3rd floor. The format for books and chapters in edited books is different than journal articles.

TOPICS

1. Do public school physical education programs really affect health-related fitness and motor skill development?
2. What has been the impact of the Americans with Disabilities Act (ADA) on public school physical education programs?
3. What does it mean to “throw like a girl?” (Sex differences in throwing)
4. What are the long-term effects of anabolic steroid use in body builders?
5. Does artificial turf contribute to athletic injuries?
6. Boxing and Parkinson's disease: Is Muhammad Ali the norm, or the exception?
7. What effects does physical exercise have on reducing stress?
8. Does aquatic therapy help reduce low-back pain during pregnancy?
9. Is there a relationship between weight-bearing exercise and osteoporosis in aging?
10. What are the effects of cell phone use on motor vehicle driving safety?

Class Schedule and Reading Assignments

<u>Week</u>	<u>Topic</u>
1. May 20 – 26	<p>Introduction, syllabus, requirements</p> <p><i>Chapter 1: Introduction to Research in Physical Activity</i></p> <p><i>Chapter 2: Developing the Problem and Using the Literature</i></p> <p><i>Chapter 3: Presenting the Problem</i></p> <p>Supplemental readings by Forscher (1963) and Barnett (1992)</p>
2. May 27 – June 2	<p><i>Chapter 4: Formulating the Method</i></p> <p><i>Chapter 5: Ethical Issues in Research and Scholarship</i></p> <p>Supplemental reading by Siedentop (1987)</p> <p>Abstract #1 (2006) due May 28</p>
3. June 3 – June 9	<p><i>Chapter 6: Becoming Acquainted with Statistical Concepts</i></p> <p><i>Chapter 7: Statistical Issues in Research Planning and Evaluation</i></p> <p><i>Chapter 8: Relationships Among Variables</i></p> <p>Faculty biographies due June 2</p> <p>Abstract #2 (2007) due June 4</p> <p>**No class Wednesday, June 9 (NASPSPA Conference)</p>
4. June 10 – June 16	<p><i>Chapter 9: Differences Among Groups</i></p> <p><i>Chapter 16: Other Descriptive Research Methods</i> (only developmental research, pp. 287–290)</p> <p>Abstract #3 (2008) due June 14</p> <p>**No class Thursday & Friday, June 10 & 11 (NASPSPA Conference)</p>
5. June 17 – June 24	<p><i>Chapter 17: Physical Activity Epidemiology Research</i></p> <p><i>Chapter 18: Experimental and Quasi-Experimental Research</i> (pp. 321–330)</p> <p><i>Chapter 20: Completing the Research Process</i></p> <p><i>Chapter 21: Ways of Reporting Research</i></p> <p>Abstract #4 (2009) due June 18</p> <p>Abstract #5 (2010) due June 23</p> <p>Library Assignment due June 23</p>
Final Exam	June 25 (Friday), 8:00 – 10:30 AM