

GEORGE MASON UNIVERSITY  
School of Recreation, Health and Tourism

EFHP 620 Research Methods for Applied Kinesiology (3)  
Fall 2012

DAY/TIME:	TR 9:00 a.m. –10:15 a.m.	LOCATION:	Bull Run Hall 247
PROFESSOR:	Dr. Nelson Cortes	EMAIL ADDRESS:	<a href="mailto:ncortes@gmu.edu">ncortes@gmu.edu</a>
OFFICE LOCATION:	Bull Run Hall 208C	PHONE NUMBER:	703-993-9257
OFFICE HOURS:	T: 10:30 – 11:30 a.m. or by appointment	FAX NUMBER:	703-993-2025
Dept. Website	<a href="http://rht.gmu.edu">rht.gmu.edu</a>	Class Website:	<a href="http://mymasonportal.gmu.edu">mymasonportal.gmu.edu</a>

PREREQUISITES: Graduate Status

COURSE DESCRIPTION:

Introduction to the techniques of research generally employed in the fields of exercise science and health.

COURSE OBJECTIVES:

At the completion of this course students should be able to:

1. Explain the importance of research as a means to solve problems in applied kinesiology.
2. Explain the application of different research approaches in applied kinesiology to solve problems in their professional field.
3. Identify threats to validity and reliability of a study and be able to design applied kinesiology studies to minimize such threats.
4. Explain various aspects of research designs.
5. Develop research practitioners that critically utilize the scientific literature in applied kinesiology.
6. Conduct a systematic analysis of the literature using hand and computer search techniques.
7. Write a research proposal in accordance with standards in applied kinesiology.
8. Design an experiment in accordance with the appropriate research methodology.
9. Appreciate and understand ethical issues associated with research in applied kinesiology.

COURSE OVERVIEW

An introduction to the basic principles of research methods in Applied Kinesiology. A study of research designs, measurement theory, data collection methods, and scientific writing principles specific to health and human performance.

**Attendance**

Attendance is **required** for this class. Students are expected to be on time, attend all class meetings and be prepared for in class assignments and projects. The student is responsible for any information presented, discussed and assigned in class regardless of whether or not the student was present. Make-up tests, quizzes, assignments, or other grades will be granted for excused absences only: serious illness (doctor's note required), official university excused absences (with proper documentation and prior notification), extenuating circumstances (PRIOR approval should be obtained or direct contact made with the instructor within 24 hours of the event). For known upcoming absences, students must contact the instructor at least one week in advance to the missed class to make up work. At the next attended class meeting the student will discuss material that is to be completed. Students will have one week from the excused absence to complete any missed assignments. It is the student's obligation to pursue any make-up work. Please be aware that any student who does not attend the

lecture during the initial drop/add phase and has not communicated with me is subject to being administratively dropped from the roster.

### **Participation**

Students are expected to read assigned material (e.g., chapters, articles) prior to class. Class will be based on discussion lead by the students and moderated by the instructor.

### **Academic Load**

Although many students must work to meet living expenses, employment and personal responsibilities are not a consideration for missed classes, late or incomplete assignments, the course content, or the course schedule (see <http://catalog.gmu.edu>). Student employment does not take priority over academic obligations. I recognize that many students need to work in order to meet living expenses, however, there are distinct guidelines for students in terms of the number of credit hours which should be attempted based on how many hours per week a student has outside employment. For additional information on this subject, please see the GMU Academic Catalog ([http://catalog.gmu.edu/content.php?catoid=5&navoid=104#Registration\\_attendance](http://catalog.gmu.edu/content.php?catoid=5&navoid=104#Registration_attendance)) for further information. Students who fail to observe these guidelines may expect no special consideration for academic problems arising from the pressures of employment.

### **Honor Code**

Students are held to the standards of the George Mason University Honor Code (see <http://honorcode.gmu.edu> for details). Violations, including cheating and plagiarism, will be reported to the Honor Committee. Student assignments may be put through plagiarism detecting software.

### **Written Assignments**

All assignments must be typed in Microsoft Word, and formatted as follows: double spaced, 12 point Times New Roman font, 1 inch margins, your name and title in the running header at top left had corner, continuous line numbers on left margin, and page numbers centered in footer. Failure to comply with any or all parts of this format will result in an unacceptable assignment, which corresponds to zero (0) points.

Pay close attention to spelling and grammar as these will count towards your grade on written assignments. American Medical Association Manual (AMA) of Style (10<sup>th</sup> edition) format must be used for all written work in this class (e.g., in referencing, creation of tables, and formatting headers for paper sections).

**Assignments must be turned in on Blackboard/MyMason Portal by the beginning of class on the specified date due. No late assignments will be accepted.** It is recommended that students keep copies of all submitted work.

### **Class Material**

I use a combination of approaches to assist your learning. These include reading assignments and discussion of the reading, learning activities that provide practical experience in research methods, analyzing research examples, online activities, and homework preparing various elements of a research proposal. You are encouraged to ask questions about the assigned reading, followed by discussion and learning activities. This means you must read the material before the class! Be prepared to be called on at random regarding the readings.

### **Technology Use During Class**

As per GMU policy, all sound emitting technology is required to be turned off during the class meeting time. No sound emitting technology (e.g., cell phones, smart phones, iPads, Tablets, pagers, etc.) is allowed at any time during the class period. Students who are observed using any form of technology inappropriately (e.g., sending text messages from cell phones, visiting social networking sites from laptops, etc) will be dismissed from class for the day, counted as an absence, and not permitted to make up missed assignments. Additionally,

no laptop computers (e.g., netbooks, notebooks, etc.) will be permitted for use during class time unless with permission from the instructor.

### **E-mail Correspondence**

Only messages that originate from a George Mason University address will be accepted. Please address the subject line for all email pertaining to this course as: *EFHP 620: Last Name – purpose of email*. The following is an appropriate professional format:

Dear Dr. Cortes (*Beginning salutation*)

I have a question regarding one of the assignments. (*Text body*)

Regards, (*Ending Salutation*)

Dr. Cortes (*Your name*)

### **ACADEMIC INTEGRITY**

GMU is an Honor Code University; please see the University Catalog for a full description of the code and the honor committee process. The principle of academic integrity is taken very seriously and violations are treated gravely. What does academic integrity mean in this course? First, it means that when you are responsible for a task, you will be the one to perform that task. When you rely on someone else's work in an aspect of the performance of that task, you will give full credit in the proper, accepted form. Another aspect of academic integrity is the free play of ideas. Vigorous discussion and debate are encouraged in this course, the firm expectation that all aspects of the class will be conducted with civility and respect for differing ideas, perspectives and traditions. When in doubt, please ask for guidance and clarification.

### **REQUIRED READINGS**

- Portney LG, Watkins MP. *Foundations of Clinical Research: Applications to Practice*. 3<sup>rd</sup> Ed. Pearson Prentice Hall; 2008 (Required)
  
- Iverson C, Christiansen S, Flanagan A, et al. *AMA Manual of Style: A Guide for Authors and Editors*. 10th ed. New York, NY: Oxford University Press; 2007
  
- Additional various readings/articles as assigned

### **ADDITIONAL REQUIREMENTS**

All students will have to use Zotero as their citation management software, and provide a digital copy of the library. Online tutorials, guides, and download of plugin is available at:

<http://infoguides.gmu.edu/content.php?pid=23687&sid=170423>

Zotero only works with Firefox browser, which is also free for download at:

<http://www.mozilla.org/en-US/firefox/new/>

## EVALUATION

**Article review:** The intent of this assignment is to increase your familiarity with the format of research articles and to encourage furthering work on your research proposal.

**Scientific Research Proposal:** This assignment is the culminating project for the course and will require both a paper and a professional presentation. The assignment is designed to assist you with identifying, clarifying, and thoughtfully developing a research topic and theoretical framework for your graduate research project. You will be required to write and present a scientific research proposal describing a project of interest to you and a faculty member within the EFHP program. The development of a research proposal illustrates familiarity with problem formation and hypothesis development, review and critical analysis of the scholarly literature, justification and application of appropriate methodology, and consideration of the implications of research findings. **DUE DECEMBER 10, 2012**

**Proposal Presentation:** The intent of this assignment is to develop your presentation skills and communicate your proposed research to your colleagues and professors.

**Class Participation** – Attending, being professional, and active participation are important components of this course and are expected from all students.

	Requirements	Points
Assignments		
#1	Article reviews (2)	5
#2	Hypothesis (Draft)	5
#3	Methods (Draft)	5
#4	References (Draft)	5
Scientific Research Proposal		
	• Introduction with hypothesis	5
	• Methods	25
	• References	5
Appendices:		
#5	• Comprehensive Literature Review	10
	• Ethics/CITI Training Certificate	2
	• Project Timeline	2
	• Budget	2
	• Human Subjects Review Board	2
	• Informed Consent Form	2
#6	Proposal Presentation	20
#7	Class Participation / Attendance	5
<b>TOTAL</b>		<b>100</b>

Grade	Percentage	Quality Points	Grade	Percentage	Quality Points
A+	93%	4.00	B	83%	3.00
A	93%	4.00	B-	80%	2.67*
A-	90%	3.67	C	73%	2.00
B+	87%	3.33	F	<73%	0.00

Note: \* Although a B- is a satisfactory grade for a course, students must maintain a 3.00 average in their degree program and present a 3.00 GPA on the courses listed on the graduation application.

**OTHER USEFUL CAMPUS RESOURCES:**

WRITING CENTER: (703) 993-1200; <http://writingcenter.gmu.edu>

Fairfax campus – A114 Robinson Hall

Prince William campus – 204 Occoquan Bldg.

UNIVERSITY LIBRARIES: “Ask a Librarian” <http://library.gmu.edu/mudge/IM/IMRef.html>

COUNSELING AND PSYCHOLOGICAL SERVICES (CAPS): (703) 993-2380; <http://caps.gmu.edu>

UNIVERSITY POLICIES: The University Catalog, <http://catalog.gmu.edu>, is the central resource for university policies affecting student, faculty, and staff conduct in university affairs.

### ***TENTATIVE COURSE SCHEDULE***

<b>Date</b>	<b>Topic</b>	<b>Chapter/Assignment Due Date</b>
Aug 28 <sup>T</sup>	Overview of course requirements Research Process	Chapter 32
Aug 30 <sup>TR</sup>	Searching the Literature	
Sept 4 <sup>T</sup>	Zotero – Building your bibliography	
Sept 6 <sup>TR</sup>	<i>Online: Finding Articles</i>	<i>Provide a reference list and associated bibliography with 10 articles that relate to your scientific research proposal topic</i>
Sept 11 <sup>T</sup>	Critical Review of an Article (Discussion) Identifying Hypothesis in articles	Chapter 31 & 34
Sept 13 <sup>TR</sup>	<i>Online: Article Review Assignments</i>	<i>Article Review Assignments (2)</i>
Sept 18 <sup>T</sup>	Formulating the Research Question / Writing Hypothesis	Chapter 7
Sept 20 <sup>TR</sup>	<i>Online: Introduction &amp; Hypothesis</i>	<i>Provide your hypothesis (draft)</i>
Sept 25 <sup>T</sup>	Sampling Validity of Measurements	Chapter 8 Chapter 6 & 9
Sept 27 <sup>TR</sup>	Research Designs	Chapter 10-11
Oct 2 <sup>T</sup>	Research Designs	Chapter 10-11
Oct 4 <sup>TR</sup>	Research Designs	Chapter 10-11
Oct 9 <sup>T</sup>	<b><i>No Class – Columbus Day Recess</i></b>	
Oct 11 <sup>TR</sup>	Exploratory Research ( <i>Dr. Shane Caswell – TBC</i> )	Chapter 13
Oct 16 <sup>T</sup>	Descriptive Research	Chapter 14
Oct 18 <sup>TR</sup>	<i>Online: Identifying Research Designs in Peer Reviewed Manuscripts</i>	<i>Online assignment</i>
Oct 23 <sup>T</sup>	Systematic reviews and meta analysis	Chapter 16
Oct 25 <sup>TR</sup>	Methods Section	
Oct 30 <sup>T</sup>	Methods Section	
Nov 1 <sup>TR</sup>	<i>Online: Read articles “Methods to Evidence”</i>	<i>Online assignment</i>
Nov 6 <sup>T</sup>	Ethical Issues in Research	Chapter 3
Nov 8 <sup>TR</sup>	<i>Online: CITI Training</i>	<i>Provide CITI Training Certificate</i>
Nov 13 <sup>T</sup>	Human Subjects Review Board/Informed Consent	
Nov 15 <sup>TR</sup>	<i>Online: Human Subjects Review Board/Informed Consent</i>	<i>Provide HSRB/Informed Consent (draft)</i>

Nov 20 <sup>T</sup>	<i>Online: Comprehensive Literature Review/References</i>	<i>Comprehensive Literature Review and References (draft)</i>
Nov 22 <sup>TR</sup>	<b>No Class – Thanksgiving Recess</b>	
Nov 27 <sup>T</sup>	Reliability of Measurements	Chapter 5
Nov 29 <sup>TR</sup>	Data Analysis – Brief Introduction	
Dec 4 <sup>T</sup>	Scientific Research Proposal / Presentations	
Dec 6 <sup>TR</sup>	<i>Online: Scientific Research Proposal / Presentations</i>	<i>Online Assignment</i>
Dec 13 <sup>TR</sup>	Presentations	
<b>Note: The instructor reserves the right to make changes to the course syllabus and/or schedule at any time. Changes will always be posted on MyMason Portal/BlackBoard</b>		

#### *Student Expectations*

- Students must adhere to the guidelines of the George Mason University Honor Code [See <http://academicintegrity.gmu.edu/honorcode/>].
- Students with disabilities who seek accommodations in a course must be registered with the George Mason University Office of Disability Services (ODS) and inform their instructor, in writing, at the beginning of the semester [See <http://ods.gmu.edu/>].
- Students must follow the university policy for Responsible Use of Computing [See <http://universitypolicy.gmu.edu/1301gen.html>].
- Students are responsible for the content of university communications sent to their George Mason University email account and are required to activate their account and check it regularly. All communication from the university, college, school, and program will be sent to students solely through their Mason email account.
- Students must follow the university policy stating that all sound emitting devices shall be turned off during class unless otherwise authorized by the instructor.
- Students are expected to exhibit professional behaviors and dispositions at all times.

#### *Campus Resources*

- The George Mason University Counseling and Psychological Services (CAPS) staff consists of professional counseling and clinical psychologists, social workers, and counselors who offer a wide range of services (e.g., individual and group counseling, workshops and outreach programs) to enhance students' personal experience and academic performance [See <http://caps.gmu.edu/>].
- The George Mason University Writing Center staff provides a variety of resources and services (e.g., tutoring, workshops, writing guides, handbooks) intended to support students as they work to construct and share knowledge through writing [See <http://writingcenter.gmu.edu/>].
- For additional information on the College of Education and Human Development, School of

Recreation, Health, and Tourism, please visit our website [See <http://rht.gmu.edu>].

CORE VALUES COMMITMENT: The College of Education and Human Development is committed to collaboration, ethical leadership, innovation, research-based practice, and social justice. Students are expected to adhere to these principles.

