

GEORGE MASON UNIVERSITY
School of Recreation, Health and Tourism

EFHP 620 Research Methods for Applied Kinesiology (3)
Fall 2011

DAY/TIME: TR 12:00 p.m. – 1:15 p.m.

LOCATION: Prince William; Occoquan #204

PROFESSOR: Dr. Lori B. Shelby

EMAIL ADDRESS: lshelby@gmu.edu

OFFICE LOCATION: Bull Run Hall #205

PHONE NUMBER: 703-895-7366 (Cell)

OFFICE HOURS: By Appointment Only

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.

1. **Web-based Content** – Participation on Blackboard and the supplemental textbook website (i.e., www.prenhall.com/portney) is required. EFHP 620 has a substantial on-line content and is classified as a hybrid course. In class sessions to supplement the on-line material will be scheduled with at least 1 week notice.
2. **Academic Load** – Although many students must work to meet living expenses, employment and personal responsibilities are not a consideration for late or incomplete assignments, missed classes, the course content, or the course schedule (see <http://catalog.gmu.edu>).
3. **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.

4. **Coursework** – All coursework must be typed. Late work will not be accepted. It is recommended that students keep copies of all submitted work.
5. **Office of Disability Services (ODS)** – If you are a student with a disability, and you need academic accommodations, contact the ODS (703-993-2474; <http://www.gmu.edu/student/drc/>) to obtain the Faculty Contact Form. The Faculty Contact Form should be provided to the professor within the first week of the semester. All academic accommodations must be arranged through ODS.

REQUIRED READINGS

Portney LG, Watkins MP. *Foundations of Clinical Research: Applications to Practice*. 3rd Ed. Pearson Prentice Hall; 2008.

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.

EVALUATION

Evaluation is based on quizzes, Blackboard activities, exams, and a research proposal. See Blackboard website @ My Mason for details. In addition, evaluation includes Review Questions. See <http://www.prenhall.com/portney> for details.

Requirements	Descriptions	Points	Percentage
Quizzes	30 Quizzes; 10 points each on Blackboard @ My Mason	300	20%
Blackboard Activities	15 Blackboard Activities; 20 points each on Blackboard @ My Mason Includes on-line discussions and other activities	300	20%
Study Suggestions and Review Questions	30 Sets of Review Questions; 10 points each @ http://www.prenhall.com/portney	300	20%
Exams	5 Exams; 100 points each On Blackboard @ My Mason	500	33%
Research Proposal	100 points On Blackboard @ My Mason	100	7%
Totals		1500	100%

Grades will be based on the total points accumulated:

Grade	Percent	Points
A+	98-100%	1470 – 1500
A	94-97%	1410 – 1469
A-	90-93%	1350 – 1409
B+	88-89%	1320 – 1349
B	84-87%	1260 – 1319
B-	80-83%	1200 – 1259
C+	78-79%	1170 – 1199
C	74-77%	1110 – 1169
C-	70-73%	1050 – 1109
F	0-69%	0 – 1049

COURSE SCHEDULE

***See Detailed and Up to Date Course Schedule on Blackboard @ My Mason for complete course schedule information. Students are required to review the on-line course schedule each week for a complete list of assignments and potential updates.** Schedule may change and is at the discretion of the instructor.

Topic	Deadline
INTRODUCTION TO EFHP 620	Tues, Aug. 30 th , 11:30 p.m.
PART I: FOUNDATIONS OF CLINICAL RESEARCH	
Chapter 1: A Concept in Clinical Research	Tues, Sept. 6 th , 11:30 p.m.
Chapter 2: The Role of Theory in Clinical Research	Tues, Sept. 6 th , 11:30 p.m.
Chapter 3: Ethical Issues in Clinical Research	Tues, Sept 13 th , 11:30 p.m.
EXAM I – CHAPTERS 1 - 3	Tues, Sept 13 th , 11:30 p.m.
PART II: CONCEPTS OF MEASUREMENT	
Chapter 4: Principles of Measurement	Tues, Sept 20 th , 11:30 p.m.
Chapter 5: Reliability of Measurements	Tues, Sept 20 th , 11:30 p.m.
Chapter 6: Validity Measurements	Tues, Sept 27 th , 11:30 p.m.
EXAM II – CHAPTERS 4-6	Tues, Sept 27 th , 11:30 p.m.
PART III: DESIGNING CLINICAL RESEARCH	
Chapter 7: Asking the Research Question	Tues, Oct. 4 th , 11:30 p.m.
Chapter 8: Sampling	Tues, Oct. 4 th , 11:30 p.m.
Chapter 9: Validity in Experimental Design	Tues, Oct. 4 th , 11:30 p.m.
Chapter 10: Experimental Designs	Tues, Oct. 11 th , 11:30 p.m.
Chapter 11: Quasi-Experimental Designs	Tues, Oct. 11 th , 11:30 p.m.
Chapter 12: Single Subject Designs	Tues, Oct. 18 th , 11:30 p.m.
Chapter 13: Exploratory Research-Observational Designs	Tues, Oct. 18 th , 11:30 p.m.
Chapter 14: Descriptive Research	Tues, Oct. 18 th , 11:30 p.m.
Chapter 15: Surveys and Questionnaires	Tues, Oct. 25 th , 11:30 p.m.
Chapter 16: Systematic Reviews and Meta-analysis	Tues, Oct. 25 th , 11:30 p.m.
EXAM III – CHAPTERS 7-16	Tues, Nov. 1 st , 11:30 p.m.
PART IV: DATA ANALYSIS	
Chapter 17: Descriptive Statistics	Tues, Nov. 1 st , 11:30 p.m.
Chapter 18: Statistical Inference	Tues, Nov. 8 th , 11:30 p.m.

Chapter 19: Comparing Two Means: The <i>t</i> -Test	Tues, Nov. 8 th , 11:30 p.m.
Chapter 20: Comparing More Than Two Means -Analysis of Variance	Tues, Nov. 8 th , 11:30 p.m.
Chapter 22: Nonparametric Tests for Group Comparisons	Tues, Nov. 15 th , 11:30 p.m.
Chapter 23: Correlation	Tues, Nov. 15 th , 11:30 p.m.
Chapter 24: Regression	Tues, Nov. 15 th , 11:30 p.m.
Chapter 25: Measures of Association for Categorical Variables – Chi-square	Tues, Nov. 22 nd , 11:30 p.m.
Chapter 30: Data Management	Tues, Nov. 22 nd , 11:30 p.m.
EXAM IV – CHAPTERS 17-20; 22-25; 30	Tues, Nov. 29 th , 11:30 p.m.
PART V: COMMUNICATION	
Chapter 31: Searching the Literature	Tues, Nov. 29 th , 11:30 p.m.
Chapter 32: Writing a Research Proposal	Tues. Dec. 6 th , 11:30 p.m.
Chapter 33: Reporting the Results of Clinical Research	Tues. Dec. 6 th , 11:30 p.m.
Chapter 34: Evaluating Research Reports	Tues. Dec. 6 th , 11:30 p.m.
EXAM V – CHAPTERS 31-34	Tues. Dec. 18 th , 11:30 p.m.
PART V – ADDITIONAL ASSESSMENTS	Tues. Dec. 18 th , 11:30 p.m.

SELECTED 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 Resources: (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.

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/>].

