

GEORGE MASON UNIVERSITY
School of Recreation, Health, and Tourism

EFHP 612 Scientific Foundations of Applied Kinesiology (3)
Fall 2013

DAY/TIME:	M, W 10:30AM – 11:45AM	LOCATION:	PW BRH # 257
PROFESSOR:	Dr. Shane Caswell	EMAIL ADDRESS:	scaswell@gmu.edu
OFFICE LOCATION:	Bull Run Hall #204	PHONE NUMBER:	703-993-4638
OFFICE HOURS:	W 12:00PM – 1:00PM or by Appointment	FAX NUMBER:	703-993-2025

PREREQUISITES

Admission to the EFHP Graduate Program

COURSE DESCRIPTION

A discussion of the foundational scientific applications of kinesiology

COURSE OBJECTIVES

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

1. Describe the sub-disciplines of applied kinesiology
2. Critically evaluate published research in the sub-disciplines of applied kinesiology
3. Demonstrate an understanding of the scientific process across the sub-disciplines of applied kinesiology
4. Present an evidence-based practice description in a selected sub-discipline of applied kinesiology

COURSE OVERVIEW

This course will provide students the opportunity to survey the various sub-disciplines of applied kinesiology and their methods of inquiry. The course will place emphasize on evidence-based practices and facilitate the development of cognitive skills necessary for critically appraising research literature.

Attendance

Students are expected to be on time, attend all class meetings and be prepared for in class assignments and projects. Excused absences include the following: illness (must bring a receipt or note from a doctor), family death, athletic/academic event, and others at the discretion of the instructor. For known upcoming absences, students must contact the instructor at least one week in advance to the missed class to make up work. In the case of illness or some other unforeseen absence, the student must contact the instructor via e-mail or telephone. At the next attended class meeting the student will discuss material that is to be completed. It is the student's obligation to pursue any make-up work.

Alternate Schedule

This course may have professionals from the field as guest speakers. Due to their professional responsibilities, guest speakers may not be able to attend a scheduled class time. Therefore, this course may require meeting outside of regularly scheduled class times and/or travel to sites off campus. Students will be informed of such meetings one week in advance of the scheduled class meeting. Students will be expected to arrange transportation to and from the meeting site.

Academic Load

Although many students must work to meet living expenses, employment and personal responsibilities are not acceptable reasons for late arrivals, missed classes, or incomplete assignments. Employment must not take priority over academic responsibilities. For additional information on this subject, please see the GMU

Academic Catalog (http://catalog.gmu.edu/content.php?catoid=5&navoid=104#Registration_attendance). Students failing to observe these guidelines should 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 (*unless otherwise specified*): double spaced, 12 point Times New Roman font, 1 inch margins, your name and title in the running header at top left hand 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 (10th 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 (*unless otherwise specified*). No late assignments will be accepted. It is recommended that students keep copies of all submitted work.

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 612: Last Name – purpose of email*. The following is an appropriate professional format:

Subject: EFHP 612: Caswell – Help with long division

Dear Dr. Caswell, (*Introductory salutation*)

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

Regards, (*Ending Salutation*)

Mr. Sponge Bob Square Pants(*Your name*)

Note: All email will be responded to in the order in which it is received. Students should allow 48 hours for a response.

REQUIRED READINGS

Greenhalgh, Trisha (2010) How to Read a Paper: The Basics of Evidence-Based Medicine. 4th Ed. BMJ Books. Additional required readings will be assigned by instructor.

NATURE OF COURSE DELIVERY

This course is delivered through a hybrid model using classroom instruction (face-to-face) and online assignments.

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

<http://www.mozilla.org/en-US/firefox/new/> There is also an extension for the google browser (Chrome).

There is also a standalone version for windows and Mac that can be downloaded from <https://www.zotero.org/>.

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

EVALUATION

Class Participation – 0 Points – Attending, being professional, and active participation are important components of this course and are expected from all students.

How Evidence Changes (HEC) – 4 Points – *Due: Online - Monday, September 18 at 10:30AM*

The goals of this assignment are to develop students “basic research tools”. At the conclusion of this assignment students should be able to perform the following:

- 1) Formulate a research question
- 2) Use Mason library databases and other resources to search and retrieve relevant peer-reviewed literature
- 3) Use a bibliographic management software
- 4) Thoughtfully consider how knowledge changes with time
- 5) Succinctly communicate using technical writing
- 6) Properly follow formatting guidelines

The steps are as follows:

1. First, develop a basic research question relating to some popular or commonly accepted professional practice or idea within your field.
2. Second, search the peer reviewed research literature and find a one landmark study relating to your question from each decade beginning in 1980 and continuing until present day (e.g. 4 articles: 1982, 1997, 2004, 2009 or 2013 etc.).

3. Third, write a concise paper describing how this knowledge has changed and why
 - a. The paper should begin by stating your research question. (e.g. *How has the evolution of pancakes has increased obesity in Canada?*)
 - b. The paper must be formatted as follows: Maximum of 1 page (not including reference section), single 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.
 - c. In text citations and references must follow the most current style guidelines published by the = American Medical Association (AMA).
 - d. Points will be deducted for spelling, grammatical, or formatting errors.
 - e. A digital copy must be turned in online with the accompanying reference library associated

Reading Research Modules (RRM) – 32 Points – *Due: Online – On assigned dates at 12:00pm see course schedule*

Students will be required to complete 8 (4 points each) online modules associated with assigned readings using the Blackboard portal. These assignments are designed to help you to put into practice the skills you are going to learn from the book chapters.

Blackboard Activities (BB) – 4 Points – *Due: Online – On assigned dates at 12:00pm see course schedule*

Students will be required to complete 4 (1 point each) online activities associated with assigned readings using the Blackboard portal. These assignments are designed to help you develop your research idea and writing skills.

Guest Speaker Participation (GSP) – 0 Points

This course incorporates researchers and professionals from the field as guest speakers. The purpose of these guest lectures is to expose you to the scientific process across the sub-disciplines of applied kinesiology. To facilitate learning, readings will be assigned prior to each guest speaker. Students are expected to arrive at each guest presentation on time having completed the readings prepared and actively engage in discussions with the speaker.

Research Proposal – 50 points – *Paper Due: Monday, December 5*

This assignment is the culminating project for the course and will require both paper and a class presentation your paper. The assignment is designed to assist you with identifying, clarifying, and the 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.

Proposal Presentation – 10 points – *Presentation Due: Final exam*

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

GRADING

ASSESSMENT		POINTS
#1 Reading Research Modules		32
#2 How Evidence Changes		4
#3 Blackboard Activities		4
#4 Research Proposal		50
	<i>Introduction with hypothesis</i>	<i>30</i>
	<i>Methods</i>	<i>5</i>
	<i>References</i>	<i>5</i>
	<i>Appendices:</i>	<i>10</i>
	<i>Literature Review</i>	<i>8</i>
	<i>Ethics/CITI Training Certificate</i>	<i>.5</i>
	<i>Project Timeline</i>	<i>.5</i>
	<i>Project Budget</i>	<i>.5</i>
	<i>Informed Consent Form</i>	<i>.5</i>
#5 Proposal Presentation		10
TOTAL POINTS		100

Course Grading Scale

The student's final letter grade will be earned based on the following scale:

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.

TENTATIVE COURSE SCHEDULE

DAY	DATE	TOPIC	REQUIREMENT DUE
1	8/26 ^M	Welcome! Overview of course requirements: What is Evidence?	
2	8/28 ^W	Graduate school and What is Evidence?	Read Chapter 1&2
3	9/2 ^M	Labor Day No class	Read Chapter 3
4	9/4 ^W	<i>Online: Chapter 12 Papers that go beyond numbers</i>	BB #1
5	9/9 ^M	Using Mason Library Resources and Zotero (<i>meet in 231 Occoquan Building</i>)	
6	9/11 ^W	Qualitative research: What and why? -- Dr. Matthew Ferry	RRM 1
7	9/16 ^M	Developing a research idea: So what... now what...	BB #2
8	9/18 ^W	Physiological research: What and why? -- Dr. Charles Robison	HEC
9	9/23 ^M	<i>Online: Chapter 6 Papers that report simple interventions</i>	RRM 2
10	9/25 ^W	Biomechanical research: What and why? -- Dr. Nelson Cortes	
11	9/30 ^M	<i>Online: Chapter 7 Papers that report complex interventions</i>	RRM 3
12	10/2 ^W	Proteomic research: What and why? -- Dr. Emanuel Petricoin	
13	10/7 [*]	<i>Online: Chapter 10 Papers that tell you what to do</i>	RRM 4
14	10/9 ^W	Special populations research: What and why? -- Dr. Jatin Ambegaonkar	
15	10/14 ^M	<i>Online: Peer-review of research ideas</i>	BB #3
16	10/16 ^W	Bioengineering Research: What and why? – Dr. Siddhartha Sikdar	
17	10/21	<i>Online: Chapter 9 Papers that summarize other papers</i>	RRM 5
18	10/23 ^W	Motor control research: What and why -- Dr. Joel Martin	
19	10/28 ^M	Action Research: What and why? –Marci Fyock, MS ATC	
20	10/30 ^W	Research proposal open discussion	
21	11/4 ^M	Online: Chapter 14 Papers that report quality improvement	RRM 6
22	11/6 ^W	Applying Research to Practice: Why and How? – Zahra Ismaeli	
23	11/1 ^M	<i>Online: Synthesizing research</i>	BB #4
24	11/13 ^W	Injury control research: What and why? -- Dr. Shane Caswell	
25	11/18 ^M	<i>Online: Basic construction of a research manuscript</i>	BB #5
26	11/20 ^W	Survey Research: What and why ?– Dr. Shane Caswell	
27	11/25 ^M	<i>Online: Chapter 13 Papers that report questionnaire research</i>	RRM 7
28	11/27 ^W	No Class – Thanksgiving Break	
29	12/3 ^M	Bringing it all together: Writing a paper	
30	12/4 ^W	Giving professional presentations	
31	12/9 ^M	Reading Day	Research Proposal Due
32	12/11	Final Exam Period – 10:30am to 1:15pm	Presentations

*Note: Faculty reserves the right to alter the schedule as necessary. *Special session. BB = Blackboard activity*

Student Expectations

- Students must adhere to the guidelines of the George Mason University Honor Code [See <http://oai.gmu.edu/honor-code/>].
- 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/policies/responsible-use-of-computing/>].
- 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.

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/>].

PROFESSIONAL BEHAVIOR: Students are expected to exhibit professional behaviors and dispositions at all times.

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.

