NUTR (EPID) 810: Physical Activity Epidemiology and Public Health
University of North Carolina at Chapel Hill
Spring Semester 2015

Course Meeting: Fridays from 9:05am-12:05 pm, 3 credit hours, meeting in McGavran-Greenberg 1303

Instructors:

Dianne Ward, Ed.D
Professor, Dept. of Nutrition
Office (campus): 2202 McGavran-Greenberg
Office (research): 225 Center for Health Promotion and Disease Prevention
CB #7426
Phone: 843-0901
Email: dward@email.unc.edu

Derek Hales, PhD
Research Assistant Professor
Dept. of Nutrition
Office: 223 Center for Health Promotion and Disease Prevention
1700 MLK Blvd, CB # 7426
Phone: 966-6089
Email: derekh@email.unc.edu

Temitope Erinosho, PhD
Research Assistant Professor
Dept. of Nutrition
Office: Center for Health Promotion and Disease Prevention
1700 MLK Blvd, CB # 7426
Phone: 966-6089
Email: erinosho@email.unc.edu

Stephanie Mazzucca
Teaching Assistant
Doctoral Candidate, Dept. of Nutrition
Office: 240-B Center for Health Promotion and Disease Prevention
CB# 7426
Phone: 843-0595
Email: mazzucca@email.unc.edu

Office hours: By appointment

Pre-requisites: Completion of EPID 600 or EPID 710 or by permission of instructor

Text: There is no textbook required for this class. Instead, readings will be available on the class website at http://sakai.unc.edu

Course Overview: The course is designed to give graduate students from a variety of disciplines a broad introduction to the role of physical activity and how it affects the public’s health. Throughout the semester, we will cover topics such as the current recommendations for physical activity, the beneficial effects of physical activity on various health-related outcomes, determinants of physical activity, how to measure physical activity at both the individual and population levels, and strategies used to promote physical activity. Graduate students within all areas of public health and disciplines outside of public health (e.g., medicine, nursing, pharmacy, social work, and psychology) could benefit from this course.

Course Objectives:
1. To understand the current recommendations for physical activity and the context in which they were developed.
2. To describe current methodology, including advantages and disadvantages, for assessing physical activity at both the individual and population levels.
3. To understand the historical context from which the study of physical activity arose and how this background affects the research and practice of physical activity epidemiology.
4. To identify the prevalence of physical activity overall; and to relate issues of surveillance, measurement and intervention to adults, as well as to special populations, including ethnic minorities, children, women, and elders.

5. To understand the relationship between physical activity and chronic disease and its associated risk factors.

6. To specify the relationship of amount of physical activity (dose) and impact (effect) of physical activity as it pertains to chronic disease and associated risk factors.

7. To identify the personal, psychological, social, and environmental correlates affecting physical activity behavior.

8. To understand the current approaches and settings for promotion of physical activity in individuals and populations.

9. To describe relevant behavioral theories which have the greatest application for use in physical activity interventions.

10. To describe how policy affects physical activity behavior.

11. To identify the problem of inactivity and how it differs in impact and behavior to activity.

12. To learn what are the economic impacts of a sedentary lifestyle.

**Graded Work:**
Student grades will be based on successful completion of course assignments, class participation, and a take-home exam. Specific details about each graded assignment and the take home exam will be posted on the course’s Sakai site. As indicated below, class attendance and participation will be incorporated into the final grade.

Grading for the class will be determined as follows:

**H** Student reads and critically engages with all of the assigned material. Participation in discussion and written assignments exhibit the ability not only to apply the material, but also to extrapolate ideas, expand into new areas, and contribute to the body of scholarship in the area. Reserved for truly extraordinary work (i.e., ≥90%).

**P** Student usually reads and engages critically with the assigned material. Able to apply material and extrapolate ideas. Consistently good work done on time (i.e., 76%-89%).

**L** Student reads and engages critically with only some of the assigned material. Able to apply the material and extrapolate ideas in only some instances (i.e., 65%-75%).

**F** Student occasionally misses class, does not always read the material, fails to critically engage with it, and is unable or unwilling to apply the material (i.e., below <65).

**Assignments (65%):**
1. Media assignments (Media Brief & Tweet; News Minute): 10%
2. Physical activity measurement project: 10%
3. Journal Club: 5%
4. Biological plausibility presentation: 10%
5. Physical activity and disease review paper: 20%
6. Physical activity and disease review presentation: 10%

**Attendance and Participation (5%):** As a seminar-type course, attendance is important and your contributions add to class quality. Please avoid missing more than 1 class period. Grades may be reduced due to excess absences. Participation will be assessed by both
the quantity and quality of a student’s contributions to each class. This is intended to promote class discussions where all students are engaged and feel comfortable contributing to the discussion.

**Final Exam (30%):** The final exam will be a take-home exam and will be assigned on April 27 with a **due date of May 4 at 11am**. Special directions as to completion will be provided on the date assigned.

**Physical Activity Commitment Pledge:** Everyone in the class (including instructors) will be asked (at the second class) to make a Commitment to Physical Activity for this semester. The Commitment will have to parts: 1. **Your own personal physical activity program** and 2. **Offering help/support to someone else**. If you are already pleased with your participation/achievement, your commitment can be to maintain your current level or participation. If you are not pleased, this is a time to make a public commitment to improve. As to offering help/support to others, as public health professionals interested in physical activity, use this as a time to help someone else get started or maintain an active lifestyle. This might be a friend, partner, relative, or client. You choose. Just Do It! You will be asked at the last class how you fulfilled your semester’s commitment.

**Daily Class Breakdown (most days):**
9:05-9:55am: Topic of day—Lecture
10:00am: News minute (part of media assignment)
10:05-10:50am: Journal Club
11:00am: Biological Presentations, Media Presentation
11:20-12:05pm: Application

**Honor Code:**
Students must observe the Honor Code in all course assignments. You are expected to produce your own work, except where group work is specifically allowed. In all written assignments, you must not plagiarize the work of others. The instrument defining the Honor Code defines plagiarism as "deliberate or reckless representation of another’s words, thoughts, or ideas as one's own without attribution in connection with submission of academic work, whether graded or otherwise." If you have questions about your responsibility under the honor code, please bring them to one of the instructors or consult with the office of the Dean of Students or the Instrument of Student Judicial Governance. This document, adopted by the Chancellor, the Faculty Council, and the Student Congress, contains all policies and procedures pertaining to the student honor system.

Please include the following pledge on all written assignments: “On my honor, I have neither given nor received unauthorized aid on this assignment.

**Syllabus Changes:** The instructors reserve the right to make changes to the syllabus (e.g., readings), including project due dates and test dates, when unforeseen circumstances occur. For updated reading assignments, we will attempt to make these within two weeks of the required date. These and others changes will be announced as early as possible so that students can adjust their schedules.
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<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Readings and/or Assignments</th>
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<tbody>
<tr>
<td></td>
<td><strong>Historical perspective of PA epidemiology</strong>&lt;br&gt;<strong>Individual vs. public health approaches</strong></td>
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<td><strong>Class Activity:</strong>&lt;br&gt;<strong>Handouts:</strong></td>
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<td>- News Minute 1 &amp; 2&lt;br&gt; - Bio Plausibility 1 &amp; 2&lt;br&gt; - Journal Club 1&lt;br&gt; - PA log&lt;br&gt; - Accelerometers</td>
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<td>Date</td>
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<td>Class Activity</td>
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| February 6 | Physical Fitness                           | News Minute 7 & 8, Bio Plausibility 7 & 8, Journal Club 2 |                      | Part D: Background (PA Guidelines), Dose Response pp. D1-D9  

**Journal Club 2:**  

**Journal Club 3:**  
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<th>Date</th>
<th>Topic</th>
<th>Class Activity</th>
<th>Journal References</th>
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| **February 20** | **Inactivity: sedentary behavior** | - News Minute 11 & 12  
- Bio Plausibility 11 & 12  
- Journal Club 4  
| **February 27** | **Individual and Interpersonal PA Correlates, Determinants and Interventions** | - Journal Club 5  
| **March 6** | **Organizational and Environmental PA Correlates, Determinants and Interventions** | - Media Brief & Tweet due  
- Marcus et al. Physical Activity Intervention Studies: What We Know and What We Need to Know. *Circulation*. 2006. 114:2739-2752  
<p>| <strong>March 13</strong> | <strong>Spring Break</strong> | // |</p>
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<tr>
<th>March 20</th>
<th><strong>Physical Activity Policy</strong></th>
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<tr>
<td><strong>Class Activity:</strong></td>
<td>Required</td>
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<tr>
<td></td>
<td>• Time-Sensitive Obesity Policy and Program Evaluation (R01)</td>
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**Journal Club 6:**
Spence et al. (2010). Uptake and effectiveness of the Children's Fitness Tax Credit in Canada: the rich get richer.

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<th>March 27</th>
<th><strong>PA through the lifecycle</strong></th>
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**April 3**

**Holiday**

**April 10**

**Disease Outcomes**
PA and Diabetes
PA and CVD

**Assignment:**
Review Paper Due

**Class Activity:**
• Class presentations

**April 17**

**Disease Outcomes**
PA and Obesity
PA and Cancer

**Class Activity:**
Class presentations

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<th>April 24</th>
<th><strong>Course wrap-up</strong></th>
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<tr>
<td><strong>Class Activity:</strong></td>
<td>Kohl et al. (2012). The pandemic of physical inactivity: global action for public health. The Lancet. Page 294-305.</td>
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<tr>
<td>• Course evaluation</td>
<td>National PA Plan: <a href="http://www.physicalactivityplan.org/index.htm">http://www.physicalactivityplan.org/index.htm</a></td>
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