Jennifer D. Roberts
KNES 601 - Epidemiology of Physical Activity

This course exposes students to epidemiological methods that are relevant to the study of physical activity. Basic epidemiological study design and methods and issues pertinent to the study of physical activity are presented early in the course. The classes are then structured to provide opportunity for in-depth analysis, critical thinking, and discussion on how epidemiological methods are used in studying physical activity behavior. Relationships between physical activity and physical and mental health outcomes will be examined.

With my recent participation with the Chesapeake Project, I am now committed to integrating concepts of sustainability into KNES 601. Introducing sustainability literacy and improving the overall fundamental awareness of sustainability within the context of physical activity epidemiology will achieve this goal. Specifically, students will have the opportunity to reflect and critically examine physical activity epidemiological research findings by considering the social, political, economic, and environmental contexts that create and sustain health disparities and inequities with respect to impacts of physical (in)activity exposure (e.g. recreational deserts) and outcome (e.g. obesity). Sustainability relevant learning objectives for this course include:

- **Describe the social ecological approach to health-related behavior and environments**
- **Examine the consumption of physical activity goods and type of physical activity though a lens of environmental sustainability**

As highlighted in green on the attached syllabus, students will be introduced to the sustainability concepts of interconnectedness/interdependence, social justice/fair distribution (Session 10 – Correlates/Predictors of Physical Activity); carbon footprint (Session 12 – Physical Activity and the Environment); and health equity (Session 13 – Physical Activity Recommendations and Right to Recreation Policies). The concept of health equity will also be emphasized in Sessions 5-9 when the students are introduced to specific adverse health outcomes and disparities associated with physical (in) activity.

In addition to class readings and discussions, specific assignments that will emphasize the aforementioned sustainability concepts include:

ASSIGNMENT B – PHYSICAL ACTIVITY ASSESSMENT PAPER

During Part II of this assignment, students will keep a 3-day diary of a change in their active transportation. For three days, students will need to eliminate passive transportation and only use active transportation (walking, biking and/or using public transportation) to transport. Students will then use the Compendium of Physical Activities to determine their MET minutes/day of active transportation and will wear a pedometer to tally each day's step counts. In order to examine the environmental impacts of active transportation, students will also calculate their reduced carbon footprint from the elimination of their car or motorbike transportation. If students already engage in active transportation for their transportation needs, they can calculate their increased carbon footprint if they were to

hypothetically use a car for personal transport. For this part of the assignment, student will write a commentary thoroughly describing their experience in changing their active transportation levels as well as the environmental impact of using active transportation. Students will also be encourage to discuss the inequities of adopting active transportation habits (e.g. costs, time, accessibility).

ASSIGNMENT D – PHYSICAL ACTIVITY AND BUILT ENVIRONMENT PAPER

For this assignment, students will use the Active Neighborhood Checklist to assess and compare the neighborhood features [(1) land use, (2) public transit stops, (3) street characteristics, (4) quality of the environment for a pedestrian, and (5) places to walk/bicycle] in **TWO** communities (e.g. Prince George's County neighborhood vs. DC neighborhood). In addition to using the Active Neighborhood Checklist, students will also take photographs highlighting built environment elements of the neighborhood. Using a zip code, address or neighborhood name in each of the two selected communities, students will also assess walkability within each of communities using Walk Score. To complete this assessment, each student will be expected to write a 5-6 page paper describing and comparing the community environments, population of the communities and the physical activity potential for each community.