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Teaching Responsibilities

My teaching responsibilities in the undergraduate program have focused on the area of health promotion. I have developed and teach courses:

- Worksite Health Promotion
- Community Health Program Planning.

A unique aspect of both courses is that they involve coordinated service learning applications that allow students to apply content learned in class in real-world settings.

I have created a supplemental course:

- Service Learning Leadership Experiences for students interested in guided service learning experiences in worksite and community settings.

I have also created a course

- Concepts of Fitness and Wellness to provide opportunities for non-majors to learn principles of healthy living.

In the graduate program, I teach the course

- Physical Activity Assessments for Health Related Research

to provide graduate students with opportunities to learn how to collect, process and interpret physical activity data.



Research interests

Details on my research are available at my lab website (www.physicalactivitylab.org). The key areas of interest in our lab are summarized below:

- Use of accelerometry-based activity monitors for evaluating physical activity behavior
- Application of consumer-based monitors and health coaching applications for behavior change
- Physical activity interventions in school, worksite, clinical and community settings
- Causes, consequences, and prevention of obesity
- Youth fitness testing and evaluation with the FITNESSGRAM youth fitness program

Service Activities

I am actively involved in campus and community programming focused on the promotion of healthy lifestyles. In addition to these roles, I am a fellow of the National Academy of Kinesiology, the American College of Sports Medicine and the Society for Health and Physical Education (SHAPE).

Professional Outlets

An important part of my professional work focuses on developing educational resources for fitness and wellness education. I serve as the Scientific Director of the FITNESSGRAM Youth Fitness program and help to ensure that the assessments and standards used in the program are sound and appropriate for use in the program (See www.fitnessgram.net for details on the program). I am also a co-author of a series of books on fitness and wellness (*Concepts of Physical Fitness* and *Concepts of Fitness and Wellness* published by McGraw Hill. These books are widely used in fitness and wellness instruction in higher education.

See more on <https://www.hs.iastate.edu/directory/profile.php?u=gwelk>

Gregory Welk's topics for the 11th International Teaching Week

- **Consumer Activity Monitors and Applications for Facilitated Health Coaching and Behavior Change Programming**

The rapid progression of research in objective physical activity monitoring has opened up many new opportunities as well as new research challenges. The lines between research and consumer monitors is clearly blurring and there are new technologies emerging with smartphones and wearable sensors that will further expand possibilities for research and clinical applications. The presentation will summarize lessons learned from systematic evaluations of various activity monitoring technologies over a number of years. Specific attention will be given to more recent studies in our lab that have examined the relative utility of various consumer based monitors compared to research-grade devices. An advantage of the various consumer activity monitors is the new opportunities available for facilitated behavior change programming. Monitors provide ways to promote self-monitoring, goal setting and other behavioral skills. Through associated smart phone apps and social media tools these devices also provide new ways to prompt and promote physical activity and lifestyle change. Insights from an ongoing research initiative called the Health Coach Study will summarize the progression of work in our lab aimed at developing cost-effective methods to promote physical activity behavior in community, clinical and worksite settings.

- **Youth Fitness Assessment and Promotion: Insights from the Evaluation and Dissemination of FITNESSGRAM Programming**

The FITNESSGRAM youth fitness program has provided schools with powerful tools to evaluate and promote physical fitness in youth. The evaluation of state and national data from FITNESSGRAM has also provided unique insights about health related fitness surveillance and school based physical activity programming. The presentation will summarize approaches and methods used to refine the criterion referenced fitness standards in Fitnessgram and the application of these standards to advance public health research on youth fitness. The presentation will also summarize insights on school physical activity programming gained through the evaluation of the NFL PLAY 60 FITNESSGRAM Partnership Project, a large participatory research network of over 1000 schools.