**The Science of Physical Activity Applied to Health and Wellbeing**

**PSYC-1036**

**Harvard Extension School**

**Course Information:**

Class Time: Thursday 3-5pm

Class Location: Online Only with optional live attendance via Canvas

**Contact Information:**

Instructor: Rachele Pojednic, PhD, EdM

E-mail: pojednic@g.harvard.edu

**Teaching Assistants**

Mollie Ewing: mewing@g.harvard.edu

Mary Kennedy: marykennedy@g.harvard.edu

**Office Hours**: By appointment

**Communication:** Please allow 48 hours for email response from the professor or TA’s.

**Course Description**: Regular physical activity is a foundation to a healthy lifestyle, yet there is a mounting epidemic of physical inactivity in our society today. Documented increases in the sedentary behaviors of Americans demands a societal response from government, city planners, employers, the medical community and individuals to reduce preventable health care costs, disease and premature death. Educating medical students and other health professionals in training on the importance of physical activity for the prevention and treatment of disease is essential to transforming health care. This course will introduce the concept of “Exercise is Medicine” to develop knowledge, skills, and abilities around physical activity to all current and aspiring health professionals and those wishing to incorporate physical activity into their own lives, workplaces, and communities.

**Course Materials:** Required readings and resources have been compiled from a variety of academic sources. There is no required textbook. The course Canvas site has Powerpoint slides and additional resources. Additional readings or substitutions may be required at the discretion of Dr. Pojednic.

**GRADUATE STUDENT Material:** Graduate students will read SPARK by John Ratey (this is optional reading for undergraduate students) Please purchase an online version of this book or hard copy. Available in several formats [here](https://www.amazon.com/Spark-Revolutionary-Science-Exercise-Brain/dp/0316113514/ref%3Dsr_1_1?ie=UTF8&qid=1548277007&sr=8-1&keywords=spark+by+john+ratey).

**Course Objectives:** The overarching goal of The Science of Physical Activity Applied to Health and Well-Being, is to demonstrate how physical activity principles and interventions apply to, and may benefit both short and long-term health outcomes. Students will gain a detailed understanding of the health benefits of physical activity and exercise and will learn how to incorporate physical activity into their own lives as well as the lives of their families, clients, and patients. Upon completion of the course students will be able to:

1. Define exercise and physical activity and describe essential components
2. Recognize that a sedentary lifestyle is the root cause for many chronic diseases and a significant amount of healthcare costs
3. List the current guidelines and recommendations for physical activity
4. Identify how physical activity affects the mind, body, behavior and health
5. Learn how to modify the learner’s personal physical activity behaviors to best serve as role model.
6. Determine areas of potential research and areas of practice for physical activity

**Assessment of Student Learning and Teaching Effectiveness**: This course is offered in class, live online and via recording using Canvas as the course management system. Student version of Powerpoint slides will be posted to Canvas as well as additional course documents to supplement material covered in classroom lectures. Assessment of course objectives will occur through online exercises and discussions, online assignments, exams, and student feedback. Adaptations to this course may occur throughout the semester to meet student needs.

**Time Line (Subject to Revision)**

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| **Week** | **Date** | **Topic** |
| 1 | 1/31 | Introduction to Exercise and Physical Activity and Guidelines |
| 2 | 2/7 | Exercise & Behavior – Social determinants, motivation, personal choices |
| 3 | 2/14 | Components of Physical Activity – Types, Assessment  |
| 4 | 2/21 | Sedentary Behavior and Solutions – *Dr. Steven Blair (Video)* |
| 5 | 2/28 | Exercise Prescription – screening, precautions, progression, injury |
| 6 | 3/7 | Exercise Physiology – Skeletal Muscle |
| 7 | 3/14 | Exercise Physiology - Cardiovascular and Pulmonary  |
|  | 3/21 | SPRING BREAK |
| 8 | 3/28 | Physical Activity and Disease – Type 2 Diabetes and CVD |
| 9 | 4/4 | Physical Activity and Disease – Cancer – *Mary Kennedy* |
| 10 | 4/11 | Exercise & Cognition *– Mollie Ewing* |
| 11 | 4/18 | Physical Activity and the Community - *Dr. Mark Fenton (Video)* |
| 12 | 4/25 | Physical Activity Hot Topics and Technology – *Lindsey Rainwater (Video)* |
| 13 | 5/2 | Physical Activity in Special Populations |
| 14 | 5/9 | Physical Activity and Nutrition  |
|  | 5/16 | FINAL EXAM |

**Lecture and Section Requirements and Grade Percentages:**

**Sections and Section Summaries (25%):** Students are expected to watch each section, when the teaching team will present an academic journal article each week (and often a corresponding popular press article). Topics that relate to the lives of the students and those they support as a health or wellness professional will be discussed. Sections will be recorded and can be watched at the student’s convenience. Each week, students will submit a summary of the section, answering several questions proposed to address the core learning objectives of the presented material.

**Physical Activity Challenges (30% Undergrad, 20% Grad):** Twelve physical activity challenges will be presented throughout the semester. These are NOT fitness challenges, but are meant to present tools used in clinical care and practical applications. Students will be required to submit their completed challenge evaluation electronically the following week. Each challenge is worth 5 points.

**Walkability Assignment (20%):** Walk audits are facilitated walks for an interdisciplinary group of community stakeholders, often led by a design expert, with the following potential goals: Education, Inspiration, and Practical Planning. Each student will conduct a walk audit within their own community to determine how the local environment can support, or potentially inhibit, active behaviors.

**Final Exam (25%):** Students will be required to take on electronic final exam covering all topics from the course. The exam is open book. The purpose of the final exam is to capture concepts presented in lectures and reading throughout the course in a comprehensive manner. The final exam will be worth approximately 100 points and can only be taken once.

**Book Review: GRADUATE STUDENTS ONLY (10%):** This grade is for graduate students only and will summarize and critique the book SPARK by John Ratey. The critical review bus incorporate lessons for the semester and be in APA format. Grading rubrics will be provided (3-4 pages).

**YellowDig Optional Discussion/Extra Credit Participation:** Each week, the teaching team will present a relevant popular press article, video, or other resource that addresses the weekly topic. Students may participate in optional discussion groups in order to facilitate more rich and in depth conversation, networking, and idea generation applicable to their own lives and communities. Participation in these discussion boards is optional, and will be counted as extra credit at the end of the semester. If you complete 100 points on Yellowdig, you will be given 3 extra points on your Final Exam Grade.

**Grading Policies:** Students’ grades are determined by calculating the total percentage of points. *There is no curve, and there will be no adjustments after grades are calculated.* All grades are posted on Canvas throughout the semester so students may monitor their progress. If, at any time, academic standing is not aligned with a student’s personal goals, (s)he is strongly encouraged to meet with Dr. Pojednic to seek guidance. It is the responsibility of students to ensure that all online assignments are submitted on time and there is NO extra credit offered in this course.

**Grade % Letter Grade Grade % Letter Grade**

92.5-100. A 76.5-79.4 C+

89.5-92.4 A- 72.5-76.4 C

86.5-89.4 B+ 69.5-72.4 C-

82.5-86.4 B 60-69.4 D

79.5-82.4 B- 0-59.9 F

**Late submission Policy: All assignments will be time stamped in Eastern Standard Time (EST).** If any assignment is submitted late, the recorded time will be the date/time of submission. Points will be deducted from the total points possible for late assignment submissions: 0 hours-2 days (50%), after 2 days (100%). These time periods include weekends.

**Exception to the above policies will be made only in the case of a documented, excused absence or requested by the Dean of Students**. In these instances:

* It is the student’s responsibility to email Dr. Pojednic within 2 days of returning to school to arrange to complete missed work, exams, and/or establish new deadlines. If the student does not email Dr. Pojednic within 2 days, she reserves the right to deduct full points for all missing assignments.
* Online assignments which may have been due while excused will be due by 11:59 pm on the first day of returning to school; the late submission policy will begin at that time.

**Academic Integrity:** You are responsible for understanding Harvard Extension School policies on academic integrity ([www.extension.harvard.edu/resources-policies/student-conduct/academic-integrity](http://www.extension.harvard.edu/resources-policies/student-conduct/academic-integrity)) and how to use sources responsibly. Not knowing the rules, misunderstanding the rules, running out of time, submitting "the wrong draft", or being overwhelmed with multiple demands are not acceptable excuses. There are no excuses for failure to uphold academic integrity. To support your learning about academic citation rules, please visit the Harvard Extension School Tips to Avoid Plagiarism ([www.extension.harvard.edu/resources-policies/resources/tips-avoid-plagiarism](http://www.extension.harvard.edu/resources-policies/resources/tips-avoid-plagiarism)), where you'll find links to the Harvard Guide to Using Sources and two, free, online 15-minute tutorials to test your knowledge of academic citation policy. The tutorials are anonymous open-learning tools.

**Accommodations for students with disabilities:** The Extension School is committed to providing an accessible academic community. The Disability Services Office offers a variety of accommodations and services to students with documented disabilities. Please visit [www.extension.harvard.edu/resources-policies/resources/disability-services-accessibility](http://www.extension.harvard.edu/resources-policies/resources/disability-services-accessibility) for more information.

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