UNIVERSITY OF PITTSBURGH
Department of Health and Human Development (FALL 2025)

HHD 2381: Clinical Exercise Physiology I
Class Time: Wednesday's 5:30pm-8pm, 32 Oak Hill Ct. Pittsburgh PA, 15219
Instructor: Benjamin Gordon, PhD, ACSM-CEP
Office: **Physical Activity & Weight Management Research Center**
Oak Hill Commons, 32 Oak Hill Court
Office #206
Pittsburgh, PA 15219
Office Hours: By appointment/ZOOM hours
Email: bgordon@pitt.edu

GENERAL COURSE DESCRIPTION: This is an advanced course in clinical exercise physiology designed to provide knowledge and understanding of the most recent advances in exercise physiology for the healthy adults but mostly for special populations across the lifespan. Emphasis will be placed on pathophysiology of chronic diseases, and the mechanisms underlying metabolic and cardiorespiratory responses and adaptations to exercise. This will be a content heavy course. This is a graduate level course - You are strongly encouraged to read ahead and spend time understanding complex physiological mechanisms outside of guided class time. A knowledge of exercise physiology is critical for student success.

PREREQUISITES: Undergraduate course in Exercise Physiology and/or admittance into the master's Program.

SUPPLEMENTAL TEXT:
1) Custom E-Book: Clinical Exercise and Lifestyle Physiology - Pitt
2) Clinical Exercise Physiology – Exercise Management for Chronic Diseases and Special Populations 5th Edition with HK Propel Access. Editors. Ehrman, Gordon, Visich, and Keteyian. Human Kinetics ISBN: 9781718200449
3) Advanced Cardiovascular Exercise Physiology 2nd Edition. Smith and Fernhall, Human Kinetics ISBN 9781492593812

SPECIFIC STUDENT COMPETENCIES/OBJECTIVES:
The course activities, experiences, assignments, and sequence are intended to provide opportunities for class members to accomplish specific course objectives, which include:

1. Brief review of current knowledge regarding acute responses and adaptations to exercise
2. Understand these responses under normal physiological conditions as well as under environmental and physiological changes that occur with chronic disease(s) including cardiovascular, respiratory, metabolic, and cancer.
3. Gain additional in-depth knowledge and understanding of how these principles change across the lifespan, from children and adolescents, and finally in older adults. Mechanisms for pathophysiology of select conditions will be emphasized in detail.
4. Understand the role of the clinical exercise physiologist in treatment of these conditions and the physiological adaptations that occur with proper exercise training to prevent and manage disease.
5. Brief introduction to the clinical considerations associated with exercise testing and training in individuals with chronic conditions (advanced content knowledge in Clinical II – Spring).

This course will use a lecture-based format with reviews, advanced discussions, and exams to ensure comprehension and synthesis of material. Students are required to assume equal responsibility for learning material through reviewing PowerPoint lectures, notes, and recommended peer reviewed readings, and attending live class. Part of the course will be asynchronous posted content (i.e., readings) combined with live interactive review of material, and application.

LIVE IN-PERSON: Will occur on Wednesday evenings. These will be for lectures and "board work", group review work (not group projects ☺), questions, and general conversation related to clinical exercise physiology. You should come prepared to illustrate as well as learn concepts utilizing figures and graphics. Some weeks will be more structured activities/lectures, and some weeks will be open for discussion and questions about posted lecture content. Engaging in structured and unstructured scientific dialogue is encouraged.

***** DR. GORDON'S HEALTH AND SAFETY STATEMENT*****

In our classroom, we will uphold a principle of mutual respect regarding health and illness. We have learned much in the wake of the pandemic, and I want to ensure that our learning environment remains safe and healthy for everyone. No one wants to be sick, so if you are feeling unwell, I respectfully ask that you either refrain from attending class until you are better or wear a mask during the period you are unwell if you choose to attend. I am committed to working with you to ensure that you receive all the necessary content you might miss due to illness. Just because you are unwell, doesn't mean you should get stressed about falling behind. Please contact me as soon as possible to discuss arrangements.

ACADEMIC INTEGRITY POLICY:

Cheating/plagiarism will not be tolerated. Students suspected of violating the University of Pittsburgh Policy on Academic Integrity, noted below, will be required to participate in the outlined procedural process as initiated by the instructor. Any student caught cheating (includes any form of academic dishonesty such as copying answers, taking quizzes/exams with another students, plagiarism, etc.) will result in an automatic "F" in this course. Additionally, the student will be reported to the appropriate university officials, and it will go on file in the student's academic record. The academic integrity form must be signed prior to taking this course and can be found on the course web page under the Academic Integrity Tab. The answer to the extra credit question on exam one is Pontzer at Duke University. A minimum sanction of a zero score for the quiz, exam or paper will be imposed. (For the full Academic Integrity policy, go to www.provost.pitt.edu/info/ai1.html.)

DISABILITY RESOURCE SERVICES:
If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Office of Disability Resources and Services, 140 William Pitt Union, 412-648-7890/412-383-3346 (Fax), as early as possible in the term. Disability Resources and Services will verify your disability and determine reasonable accommodations for this course.

GRADING SCALE
Your grade will be determined by dividing your actual points by the total number of points attainable.

GRADES:	**APPROXIMATE POINT VALUE***
3 EXAMS	Approx. 100-150 pts each
3 GROUP Exam Review Assignments	Approx. 20 pts each

The following grading scale will be used to determine final course grades.

A	=	90-100%
B+	=	87-89.9%
B	=	80-86.9%
C+	=	77-79.9%
C	=	70-76.9%
D+	=	67-69.9%
D	=	60-66.9%
F	=	0-59.9%

Incomplete or G Grades
Students must complete all course requirements to receive a grade for this course. In the event of extenuating personal circumstances, such as a medical emergency or a death in the family, an I or G grade may be awarded to signify unfinished course work. *G grades will not be an option for students who fall behind in the course for non-emergency reasons.* Students assigned I or G grades are required to complete course requirements no later than one year after the term in which the course was taken. After the deadline has passed, the I or G grade will remain on the record, and the student will be required to reregister for the course if it is needed to fulfill requirements for graduation.

ATTENDANCE POLICY
Attendance is highly recommended for graduate level courses. If a class is to be missed, good communication prior to the missed class is expected. **There will be no make-ups for exams or assignments unless prior arrangements have been made with the instructor.** Missed exams or assignments can only be made up if accompanied by written documentation justifying the absence. Decisions regarding the justification of the absence will be made by the instructor. These must be made up within one week at a time and date approved by the instructor. In rare cases where unexpected (emergency) circumstances arise, it is the student's responsibility to notify the instructor immediately (i.e., within 48 hours) in order to ensure the possibility of a make-up exam or project.

Department of Health and Human Development Grievance Procedure: If a student feels that they have been treated unfairly by the instructor regarding their grade or other aspects of their course participation, there are a series of steps that should be taken in an attempt to resolve this matter. These include the following:

1. The student should first inform the instructor of the course of the issue in an attempt to resolve this matter. If the course is taught by a Teaching Assistant, Graduate Student, or Part-Time instructor, their faculty supervisor should also be informed of this matter. The student should bring this issue to the attention of the instructor in a timely matter and should maintain a record of interactions that occurred with the instructor regarding the matter in question. The course instructor should take necessary steps to address the concern raised by the student in a timely matter and should maintain a record of the interactions that occurred with the student regarding this matter.
2. If, after reasonable attempts to resolve the matter, the matter is not resolved in a manner that is deemed to be acceptable to the student, the student retains the right to file a grievance. This grievance is to be filed with the Department Chair in the form of a written document that can be submitted via email or campus mail. This document should include the following:
    a. Student's name
    b. Student contact information (email, address, telephone number)
    c. Information on the course for which the grievance applies (course title, course number, instructor name).
    d. A copy of the course syllabus that was provided to the student by the instructor
    e. Detailed description of the grievance and additional information the student feels is pertinent to this matter.

    After receiving this information, the Department Chair will inform the student if additional information is needed, as appropriate will discuss this matter with the student and the instructor and will issue a decision in a timely manner.
3. If the student is not willing to accept the decision of the Department Chair, the student will be informed that they can request an additional review of this matter through the Office of the Dean of the School of Education. If the student decides to pursue this, the student should contact the Associate Dean for Student Affairs & Certification in the School of Education at the University of Pittsburgh.

FALL 2025 TENTATIVE COURSE SCHEDULE

The following course schedule is tentative and may change at the discretion of the instructor.
You are responsible for any changes made to the syllabus that are posted.

DATE	MODULE TOPIC	Custom Book RELATED CHAPTER READINGS
AUGUST 27	Syllabus/ Intro + PA Promotion Across Lifespan + ExPhys Re-visit	1, 2
SEPTEMBER 3	Cardiovascular Disease (Central and Peripheral)	10, 14
SEPTEMBER 10	Cardiovascular Disease (Central and Peripheral)	15, 16
SEPTEMBER 17	Cardiovascular Disease (Central and Peripheral)	17, 30
SEPTEMBER 24	Dysautonomias (e.g., POTS) + Exam Review	-
OCTOBER 1	**EXAM #1**	-
OCTOBER 8	Respiratory Diseases and Disorders	19
OCTOBER 15	Respiratory Diseases and Disorders	20
OCTOBER 22	Cancer	22
OCTOBER 29	Cancer + Exam Review	22
NOVEMBER 5	**EXAM #2**	-
NOVEMBER 12	Diabetes & Obesity and Weight Loss	8, 9
NOVEMBER 19	Review Diabetes & Obesity and Weight Loss	8, 9
NOVEMBER 26	No Class. – Thanksgiving Holiday	-
DECEMBER 4	Exam Review	-
DECEMBER 11	**FINAL EXAM (#3)**	**-**