

UNIVERSITY OF PITTSBURGH
Department of Health and Human Development (FALL 2023)

HHD 2381: Clinical Exercise Physiology 1

Course Time: Tuesday'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.

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

SUPPLEMENTAL TEXT:

1) Custom EBook: <https://us.humankinetics.com/products/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. Review the current knowledge related to metabolic and cardiorespiratory 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 heart, respiratory, metabolic, and cancer.
3. Gain additional knowledge and understanding of how these principles change across the lifespan, from children and adolescents, and finally in older adults.
4. Understand the role of the clinical exercise physiologist in treatment of these conditions and the physiological adaptations that occur with proper exercise training.
5. Know the clinical considerations associated with exercise testing and training in individuals with chronic conditions.
6. Be able to examine case studies and apply the knowledge learned to real patients.

This course will use a lecture-based format with reviews, case studies, discussions, and exams to ensure comprehension and synthesis of material. Students are required to assume partial 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 combined with live interactive review of material and application.

LIVE IN-PERSON: Will occur on Tuesday evenings. These will be for lectures, group work, case studies, questions, and general conversation. 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.

COVID/ Health & Safety Statement: During this pandemic, it is extremely important that you abide by the [public health regulations](#), the University of Pittsburgh's [health standards and guidelines](#), and [Pitt's Health Rules](#). These rules have been developed to protect the health and safety of all of us. Universal [face covering](#) will be required in all classrooms and in every building on campus, without exceptions, regardless of vaccination status if the Allegheny County transmission level rises to high. This means you must wear a face covering that properly covers your nose and mouth when you are in the classroom. If you do not comply, you will be asked to leave class. It is your responsibility have the required face covering when entering a university building or classroom. For low and medium transmission masks may be worn at your discretion. Anyone may wear a mask if they choose at any time. For the most up-to-date information and guidance, please visit coronavirus.pitt.edu and check your Pitt email for updates before each class.

Finally, we will operate in the classroom with a principle of mutual respect regarding illness. We have learned much in the wake of the pandemic, and I want to ensure our learning environment is one of health and safety for you and for me. If you are sick, I respectfully ask that you not attend class until you are better or that you kindly wear a mask in class during the period you are unwell should you choose to attend. I promise to work with you to ensure you get all that you need in terms of missed content due to illness. 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. 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.

MISCELLANEOUS ISSUES

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 CourseWeb page under the Academic Integrity Tab.

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. 100-200 pts each
CASE STUDY ASSIGNMENT	Approx. 50 points
REVIEW ASSIGNMENT	Approx. 20 POINTS

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 quizzes or assignments unless prior arrangements have been made with the instructor.** Missed quizzes 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 with regard to 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 2023 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	RELATED CHAPTER READINGS
AUGUST 29	Syllabus/ Intro + PA Promotion Across Lifespan + ExPhys Basics	1, 2
SEPTEMBER 5	ExPhys Basics + Cardiovascular Disease (Central and Peripheral)	10, 14
SEPTEMBER 12	Cardiovascular Disease (Central and Peripheral)	15, 16
SEPTEMBER 19	Cardiovascular Disease (Central and Peripheral)	17, 30
SEPTEMBER 26	Cardiovascular Disease (Central and Peripheral) + Review	-
OCTOBER 3	EXAM #1	-
OCTOBER 10	Respiratory Diseases	19
OCTOBER 17	Respiratory Diseases	20
OCTOBER 24	Cancer	22
OCTOBER 31	Cancer + Review	22
NOVEMBER 7	EXAM #2	-
NOVEMBER 14	Diabetes & Obesity	8, 9
NOVEMBER 21	No Class – Review Diabetes & Obesity	8, 9
NOVEMBER 28	Diabetes & Obesity	8, 9
DECEMBER 5	Review OR Exam #3	-
DECEMBER 12	EXAM #3	-