

## **HHD 2384: Movement Science in Health and Physical Activities Fall 2023**

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### **Course Objectives**

This course in Movement Science in Health and Physical Activities is designed to examine human movements across the lifespan (youth, adults, older adults), health conditions, and exercise-related activities. Students will learn how to assess movement patterns and how to apply this knowledge to prevention, treatment, and rehabilitation situations. This course will provide fundamental knowledge in the fields of biomechanics, movement and health sciences. This course will be a combination of classroom and laboratory experiences. Upon successful completion of the course, students should be able to understand or perform the below:

1. Understand and utilize biomechanics terminology for effective professional communication
2. Understand concepts associated with kinesiology and biomechanics
3. Understand anatomy and physiology of the skeletal, nervous, and muscular systems as it applies to movement science
4. Obtain and analyze kinematics of human movement
5. Obtain and analyze kinetics that occur during human movement
6. Obtain and analyze muscle activity that occurs during human movement
7. Appreciate the pervasiveness and diversity of movement in human life
8. Identify differences in biomechanics across the lifespan and health conditions
9. Understand the application of movement science to functional activities
10. Explore current topics in movement science and biomechanics
11. Use the research process to evaluate movements and explain findings in a coherent and precise manner

### **Course Description**

To accomplish the above objectives, the course is designed in the following manner. Class lectures covering the critical information necessary to accomplish course objectives will include Power Point lectures provided on CourseWeb for students to access and supplement links, videos, and PDF documents on CourseWeb for students to access. Current topics and research will be explored through journal articles and in class discussions. The class is accompanied by laboratories which will provide students with hands on experience and assist with reinforcing concepts.

This information will carry forward into your professional careers. Ask for help. If you find that you are experiencing difficulties, please ask for assistance sooner than later.

## **Class Meeting Times**

Lecture: Monday 5:30 – 8:00 PM

## **Course Materials**

Optional Texts: Kinesiology: Scientific Basis of Human Movement by Hamilton  
Dynamic Human Anatomy by Whiting  
Clinical Mechanics & Kinesiology by Loudon  
Human Movement: An Introductory Text by Everett

## **Course Requirements and Grading**

### **Quizzes – 10%**

Vary class-to-class but majority will be multiple choice or true/false. Based on content from previous week.

### **Journal Article Presentations – 20%**

Students will be responsible for identifying journal article on specified topic and leading in class discussion.

### **Participation – 5%**

Students will be responsible for participating in course discussion, guest lecture interaction and, when not leading the journal article discussion, students are expected to actively participate.

### **Assignments & Laboratories – 30%**

Students will be responsible for the completion of assignments and laboratories.

### **Final Project – 35%**

Students will be responsible for the completion of assignments leading up to and including a final project.

General grading scale, subject to curve if deemed necessary by instructor is as follows:

90-100% A- thru A+  
80-89.9% B- thru B+  
70-79.9% C- thru C+  
60-69.9% D- thru D+  
<60% F

### **IMPORTANT:**

- All evaluations are “closed-book” unless otherwise noted by instructor.
- Use of cell phones, smart watches, tablets, and laptops is not permitted during quizzes and exams.
- Use of cell phones is prohibited during class – no exceptions.
  - Students will be asked to leave class if caught on cellular devices.
- Students are required to be present and on-time.

- If late and a quiz or exam is missed, students will not be permitted to make-up the quiz.
  - Failure to be present for a quiz will result in a zero (0 points) given.
- Quizzes and exams can be made-up under the following conditions for absences that are considered excusable:
  - Medical Emergency or Sickness – Must have a note from medical doctor documenting medical visit (must correspond with and list dates of absence).
  - Mandatory Academic Event – Must have a note from advisor/professor documenting attendance (must correspond with and list dates of absence).
  - Personal or Family Emergency – Must communicate with Dr. Chambers prior to missing class so it can be determined if this is a reasonable reason for missing and alternative arrangements can be made immediately.
- The instructor reserves the right to alter the grade assignment algorithm in a systematic manner.

## Course Policies

### Communication

Email is the best form of communication. The subject line should read:

**HPA 2384\_ YOUR LAST NAME**

### Class Attendance

**Class attendance** is expected and **strongly encouraged**. If a student misses a class, it is the student's responsibility, not the professor's, to obtain the material which was discussed in class. If you miss a class, please get the notes from a classmate. A significant portion of the class material may not be written in lecture slides. I do not always provide full notes for my lecture slides to students who miss class because they would still be missing much of the material. My notes will not provide all of the course material.

### Inclement Weather

Inclement weather may lead to a cancellation of class. If the University decides to close, cancel, or delay classes, an announcement is posted immediately on various websites, including [www.pitt.edu](http://www.pitt.edu). In cases where the University does not close and the weather is questionable, the instructor will send you an email notice or post an announcement on canvas if class is cancelled. If no such email or announcement is made, then class will continue as normal. Any work due on the day of the cancelled class will be due on the next scheduled class or as otherwise directed by the instructor. Any student absent due to bad weather while class is still in session must notify the instructor prior to class. Students are responsible for getting cancellation information. In all emergency situations, however, we rely on individuals to make the best decision for themselves about their safety.

### **Academic Integrity**

All students are expected to adhere to the standards of academic honesty. Any student engaged in cheating, plagiarism, or other acts of academic dishonesty would be subject to disciplinary action. Students in this course will be expected to comply with the University of Pittsburgh's Policy on Academic Integrity. Any student suspected of violating this obligation for any reason during the semester will be required to participate in the procedural process, initiated at the instructor level, as outlined in the University Guidelines on Academic Integrity. This may include, but is not limited to, the confiscation of the examination of any individual suspected of violating University Policy. Furthermore, no student may bring any unauthorized materials to an exam, including dictionaries and programmable calculators. To learn more about Academic Integrity, visit the Academic Integrity Guide for an overview of the topic. For hands on practice, complete the Understanding and Avoiding Plagiarism tutorial.

### **Disability 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 Disability Resources and Services (DRS), 140 William Pitt Union, (412) 648- 7890, [drsrecep@pitt.edu](mailto:drsrecep@pitt.edu), (412) 228-5347 for P3 ASL users, as early as possible in the term. DRS will verify your disability and determine reasonable accommodations for this course.

### **Accessibility**

The Canvas LMS platform was built using the most modern HTML and CSS technologies, and is committed to W3C's Web Accessibility Initiative and Section 508 guidelines. Specific details regarding individual feature compliance are documented and updated regularly.

### **Student Opinion of Teaching Surveys**

Students in this class will be asked to complete a Student Opinion of Teaching Survey. Surveys will be sent via Pitt email and appear on your Canvas landing page during the last three weeks of class meeting days. Your responses are anonymous. Please take time to thoughtfully respond, your feedback is important to me. Read more about Student Opinion of Teaching Surveys.

### **Copyright Notice**

These materials may be protected by copyright. United States copyright law, 17 USC section 101, et seq., in addition to University policy and procedures, prohibit unauthorized duplication or retransmission of course materials. See Library of Congress Copyright Office and the University Copyright Policy.

### **Statement on Classroom Recording**

To ensure the free and open discussion of ideas, students may not record classroom lectures, discussion and/or activities without the advance written permission of the instructor, and any such recording properly approved in advance can be used solely for the student's own private use.

### **Religious Observance**

The observance of religious holidays (activities observed by a religious group of which a student is a member) and cultural practices are an important reflection of diversity. As your instructor, I am committed to providing equivalent educational opportunities to students of all belief systems. At the beginning of the semester, you should review the course requirements to identify foreseeable conflicts with assignments, exams, or other required attendance. If possible, please contact me within the first two weeks of the semester to allow time for us to discuss and make fair and reasonable adjustments to the schedule and/or tasks.

### **Diversity and Inclusion**

This instructor maintains an inclusive classroom. The University of Pittsburgh does not tolerate any form of discrimination, harassment, or retaliation based on disability, race, color, religion, national origin, ancestry, genetic information, marital status, familial status, sex, age, sexual orientation, veteran status or gender identity or other factors as stated in the University's Title IX policy. The University is committed to taking prompt action to end a hostile environment that interferes with the University's mission. For more information about policies, procedures, and practices, see:

<https://www.diversity.pitt.edu/civilrights-title-ix-compliance/policies-procedures-and-practices>.

I ask that everyone in the class strive to help ensure that other members of this class can learn in a supportive and respectful environment. If there are instances of the aforementioned issues, please contact the Title IX Coordinator, by calling 412-648-7860, or e-mailing [titleixcoordinator@pitt.edu](mailto:titleixcoordinator@pitt.edu). Reports can also be filed online: <https://www.diversity.pitt.edu/make-report/report-form>. You may also choose to report this to a faculty/staff member; they are required to communicate this to the University's Office of Diversity and Inclusion. If you wish to maintain complete confidentiality, you may also contact the University Counseling Center (412-648-7930).

### **Gender Inclusive Language Statement**

Language is gender-inclusive and non-sexist when we use words that affirm and respect how people describe, express, and experience their gender. Just as sexist language excludes women's experiences, non-gender-inclusive language excludes the experiences of individuals whose identities may not fit the gender binary, and/or who may not identify with the sex they were assigned at birth. Identities including trans, intersex, and genderqueer reflect personal descriptions, expressions, and experiences. Gender-inclusive/non-sexist language acknowledges people of any gender (for example, first year student versus freshman, chair versus chairman, humankind versus mankind, etc.). It also affirms non-binary gender identifications, and recognizes the difference between biological sex and gender expression. Students, faculty, and staff may share their preferred pronouns and names, and these gender identities and gender expressions should be honored.

### **Health and Safety Statement**

In the midst of this pandemic, it is extremely important that you abide by public health regulations and University of Pittsburgh health standards and guidelines. While in class, at a minimum this means that you must wear a face covering and comply with any physical distancing requirements when in place; other requirements may be added by

the University during the semester. These rules have been developed to protect the health and safety of all community members. Failure to comply with these requirements will result in you not being permitted to attend class in person and could result in a Student Conduct violation. For the most up-to-date information and guidance, please visit [coronavirus.pitt.edu](https://coronavirus.pitt.edu) and check your Pitt email for updates before each class.

### **Communication to Instructor Pertaining to Illness**

As in any situation regarding class absence (remote or in person), a student who becomes ill (albeit COVID-19 related or not) is responsible for communicating with me regarding course absences. Please contact me and provide documentation when absences affect quizzes/exams. This should be done via email as soon as possible.

### **Take Care of Yourself**

Do your best to maintain a healthy lifestyle this semester by eating well, exercising, avoiding drugs and alcohol, getting enough sleep, and taking time to relax. Despite what you might hear, using your time to take care of yourself will actually help you achieve your academic goals more than spending too much time studying. All of us benefit from support and guidance during times of struggle. There are many helpful resources available at Pitt. An important part of the college experience is learning how to ask for help. Take the time to learn about all that's available and take advantage of it. Ask for support sooner rather than later – this always helps. If you or anyone you know experiences any academic stress, difficult life events, or difficult feelings like anxiety or depression, we strongly encourage you to seek support. Consider reaching out to a friend, faculty or family member you trust for assistance connecting to the support that can help. The University Counseling Center is here for you: call 412-648-7930 and visit their website. If you or someone you know is feeling suicidal, call someone immediately, day or night: University Counseling Center (UCC): 412 648-7930 University Counseling Center Mental Health Crisis Response: 412-648-7930 x1 Resolve Crisis Network: 888-796-8226 (888-7-YOU-CAN) If the situation is life threatening, call the Police: On-campus: Pitt Police: 412-268-2121 Off-campus: 911

### **ONLINE & HYBRID LEARNING**

This semester may involve online or hybrid learning. The number of students in the classroom may be limited, class start times may be shifted, and masks will be required if in person. In addition, some or all students may not be present in the physical classroom. Those students who participate from a remote location will need to put forth extra effort to engage in the course, communicate/interact with their instructors and classmates, and participate in course activities. Above all, students should try to be as flexible and adaptive as possible as the semester progresses. This course may involve asynchronous and synchronous learning delivered through Canvas, Panopto, and ZOOM. We may incorporate active synchronous learning and anatomical software. As the University climate changes, how course materials will be delivered may change. All updates to course materials and information will be provided through Canvas. If you are having any difficulties completing this course (technology, personal, health, etc) please do not wait to contact Dr. Chambers. Communication is the key to this semester and Dr. Chambers will work with you if you maintain contact.

### **Student Responsibilities**

**Attendance:** While an online course may not have a fixed weekly meeting time, consistent attendance is still expected. The following actions on your part will demonstrate attendance:

1. Logging into the Canvas course environment and participating in all activities including the introductory activities.
2. Frequently and regularly accessing course instructional materials and assignments (assignments, discussion forums and projects) posted on the Canvas course environment during the entire semester.
3. Read and respond to the course e-mails.
4. Read course announcements.

**Participation:** Students will actively engage and participate in the online Canvas course environment. Active participation consists of the following actions and activities:

1. Setup and access connect account and required course software by the second week of class.
2. Engage actively in the online course by reading, reviewing and watching pertinent instructional materials provided in the Canvas course environment throughout the semester.
3. Read all assignments, discussion forums and project guidelines thoroughly.
4. Submit all assignments electronically by the due dates and times as specified in the guidelines provided.
5. All assessments such as quizzes and exams will be delivered online. All assignments will be listed on the Syllabus page and included in specific Modules.
6. Participate in discussion forums by creating threads and posting comments by the due dates and times as specified in the guidelines provided.
7. Your contributions to the discussions (posts and responses) should be complete and free of grammatical or structural errors.
8. All written assignments must follow APA format. A link to a Library Guide is provided on the course menu on the left which includes guides on APA.
9. Complete all assignments and projects by the due date and time specified.

**Missing Coursework:** Any missed coursework will receive a grade of zero if an appropriate documented excuse is not provided. This includes all graded activities and tasks. Students **MUST** notify the instructor in case of a non-life threatening emergency as soon as possible. It is your professional obligation to notify the instructor of any such emergency within a reasonable time period. A doctor's written verification of illness **MUST** be provided to the instructor before any make-up work will be accepted and/or rescheduled. For a non-medical emergency, securing documentation to support your explanation will increase the likelihood of being allowed the opportunity for make-up work. A doctor's note or other documentation will be accepted at the discretion of the instructor. If make-up work is granted, the instructor may alter the contents of such assignments or tests to minimize potential issues of academic integrity. The time lines for submitting make-up work will be determined by the instructor on a case-by-case basis.

### **Instructor Obligations to Students**

Just as I have expectations for your conduct and behavior in the course, you have expectations from me as your instructor. I will ensure that I maintain an active role in the course. I will log into the course daily and I will respond to any queries/concerns posted

in the student lounge. I will ensure that I participate in the discussion forums periodically. As students, you are expected to engage and interact with your peers consistently and extensively in the discussion forums. I will also provide timely feedback to you on submitted assignments and projects. You are also encouraged to communicate privately with the instructor using email or the Send Email tool in Canvas. You should expect a response from me within 36 hours of receiving your e-mails and course messages. I will be logging in and checking the course on a daily basis. Please note that I will typically be more available to address queries and respond to discussion forum comments in the evenings.

I also understand that some of you may wish to work ahead but please be aware that I will not grade assignments ahead of schedule.

### **Netiquette**

An online course requires the same level of professionalism, respect, and courtesy that you would show your instructor and classmates in a face-to-face setting. To that end, please observe the following standards in the online class:

A. Discussion forums: The purpose of discussion forums in an academic setting is to advance the understanding of a given topic. Therefore, your threads and posts should:

- be substantive (more than a few words), constructive, and on-topic;
- advance the discussion in a meaningful way;
- demonstrate professional courtesy;
- use correct grammar and punctuation (no acronyms commonly used in texting).

B. Electronic communication: You should avoid casual language and abbreviations commonly used in texting, which are not appropriate for in-class communication. Care should be taken to use correct grammar and punctuation.

C. Websites: You should use care when sharing websites in your posts by ensuring that the website is appropriate for an academic setting, non-offensive in nature, and relevant to the topic at hand.

### **Zoom**

- Do not share your Zoom classroom link or password with others.
- Be early. You will wait to be admitted into the meeting. At the scheduled class time, the instructor will begin the meeting.
- Come prepared and participate.
- Setup in as professional a space as possible and stay seated. Find a quiet place, free of distractions.
- Use only your full (and real) name. Just as during regular learning, we want to honor the dignity and importance of our own and each other's names. Do not change your Zoom ID or Google profile name to a nickname or anything other than the name your instructors call you by in your classes.
- Please note that all lectures in this course are recorded to asynchronous access. If you do not wish to be recorded during a session, please refrain from using your camera or audio.
- Mute your microphone unless you are called upon to speak.
- Click the raise hand button or raise your hand if you have a question or want to contribute.



- Dress for success. Just like in person learning, casual clothing is OK, but no PJ's or clothing that would otherwise distract from the seriousness of the meetings.
- No Side "Conversations". Please do not privately text, chat, or engage in other electronic communication during Zoom meetings.
- Do Not Record the Meetings. Though you may want to preserve a meeting for later use, in some states this would be illegal. Please do not record any Zoom meeting using your computer or another recording device.

### Schedule for HPA 2384

\*Subject to change\*

University of Pittsburgh

Date	Topic
8/28	Housekeeping Intro to Movement Science
9/4	NO CLASS
9/11	Kinematics
9/18	Motion Capture
9/25	Kinetics
10/2	<i>Neuromuscular</i>
10/9	<i>Balance</i>
10/16	Gait
10/23	Gait & Aging
10/30	Obesity & Movement
11/6	Amputee Gait
11/13	Training & Sports
11/20	NO CLASS
11/27	Final Project Data Collection
12/4	Adaptive Sports
12/11	FINALS WEEK Final Presentations