Syllabus
Course: Bio4010
Professor: Pablo Peixoto, PhD
Office hours: Fridays 4-5pm, in person (office 910C) or Zoom.
Tutoring hours: see in announcements

Textbook: **Human Physiology: An Integrated Approach, 8/E** Silverthorn, ISBN-10: 0321750071 • ISBN-13: 9780321750075 ©2013 • Pearson • Cloth
You will need this e-text book to access the weekly homework (dynamic study modules).
See registration instructions in the last page.

Lab Manual: Experiments for LabStation System will be employed. Instruction manuals and protocols are available on BrightSpace.

Except for exams, all assignments are to be uploaded to BrightSpace for grading, including lab reports. You are allowed a total of 4 absences in class, but if you miss a laboratory assignment, your write up is still due and will be worth 50%. Any missed assignments will lead to an INC final grade.

Grading Procedure:

A) Three mid-term and one final exam corresponding to **10 % each (totaling 40%** of final grade). Tentative dates are noted in the class schedule. Make up exams will require appropriate documentation and an appointment with the disabilities office: evelyn.morales@baruch.cuny.edu
B) Every week there will be an online homework lecture assignment (dynamic study modules) due on Sundays by midnight. The total assignments are worth **20%**.
C) Group laboratory (Labstation) labs are due by Sunday following the lab date. Labstation group reports are to be uploaded to BrightSpace. If not turned in, a grade of incomplete will be assigned. The total lab grade will be **20%** of the final.
D) A review article based on a physiology topic of interest based on original research articles and clinical studies (worth **10%** of final grade).
    - The title of the topic is due **February 23** and must be approved.
    - Copies of original articles will be uploaded as a single PDF file including a preliminary abstract (25% of the Review Grade) to the review article. **Due on April 20.**
    - Completed review paper due **May 2**.
    - There will be 1 point deduction for each class the above deadlines are not met. An incomplete grade will be assigned if any of the above assignments is not uploaded on blackboard.
E) Each student will make an oral presentation (**5%**) of a relevant excerpt from biomedical journals (available on Blackboard, assignments folder). Presentation dates and topics will be picked on a first-come-first-serve basis.
F) Community Learning **(5%)**:
    a) You will provide a short (<250 words) summary of another student's review article, listing 2 strengths and 2 potential pitfalls. (50%)
    b) You will demonstrate how you helped other students in our class in two areas of your choosing (50%).

Please refer to the student manual on Academic Integrity on Blackboard for information and College policies.

The use of artificial intelligence tools is encouraged. However, you are still required to follow academic integrity standards. If you decide to use artificial intelligence to complete any portion of any class assignment, you must include the following:

- A paragraph at the top titled "Use of AI" detailing what you used AI for in each session and all the prompts you used to get the results.
- A citation (see example below).

"OpenAI (2024). ChatGPT. [Computer program]. Available at: https://openai.com/blog/chatgpt/ (Accessed 20 February 2025)."

Note that AI tools cannot serve as reference for scientific knowledge and that the original source must be cited.

Should you experience any difficulties that might hamper your academic success, know that my office is a safe space. The first step to overcome any difficulties is to talk to your professor. I am also prepared to help you find counseling and emergency financial aid.

BIO4010 Class schedule – Spring 2025

1/28	Lecture - introduction and review (chapters 1&3)
1/30	Lecture – transport across membranes (ch 5)
2/4	Lecture - Energy Metabolism (ch 4)
2/6	Lab - Lactate measurement, Mitochondrial membrane potential and ROS emission
2/11	Lab review; Cont. ch4
2/13	Lecture - Excitable tissues, nervous system (chapters 8,9,11).
2/20	Cont. ch 9,11
2/25	Cont. Lecture nervous system. Laboratory: Intro to LabStation
2/27	EXAM # 1 Covering chapters 1,3, 4, and 5
3/4	Lecture: Excitable tissues, skeletal muscle (ch 12 pp 399-425, ch 13 pp 444-452)
3/11	Laboratory: Properties of skeletal muscle and neuromuscular junction
3/13	Lab review; Lecture - synapses (ch 8 pp 266-281), neuromuscular junctions (ch 11 pp 391-393, ch 12 pp 410-411)
3/18	Laboratory: EMG
3/20	Lab review; Lecture: Energy requirements of skeletal muscle, smooth muscle (ch 12, pp 413-422; pp 426-435)
3/25	EXAM # 2 covering chapters 8, 9, 11, 12, 13 excluding Energy requirements of skeletal muscle and Smooth muscle
3/27	Lecture: Cont. Smooth muscle; Properties of cardiac muscle (ch 14 pp 471-484)
4/1	Laboratory: Properties of cardiac muscle
4/3	Lab review; Lecture: The conduction system of the heart; ECG; Cardiac cycle (ch 14 pp 484-502)
4/8	Laboratory: ECG; Blood pressure
4/10	Lab review; Lecture: Blood vessels; Capillary exchange; Control of circulation (ch 14 & 15)
4/12-4/20	SPRING RECESS !!!! good time to work on review articles
4/22	Control of circulation (Ch 15)
4/24	Cont. Blood flow - control of circulation; Functions of blood (ch 16 & 24)
4/29	EXAM # 3 covering rest of chapter 12 + chapters 14, 15
5/1	Lecture: Respiration - mechanics of breathing (ch 17); Gas exchange and transport (ch 18)
5/6	Laboratory: Respiratory mechanics
5/8	Lab review; Lecture: Excretory system (ch 19); Fluid and electrolyte balance (ch 20)
5/13	Laboratory: Urinary function
5/15	Lecture: Digestion (ch 21)
May 16 / 22	**Finals week**

To register for Bio4010_Spring2025_Peixoto:

1. Go to https://mlm.pearson.com/enrollment/peixoto39351.
2. Sign in with your Pearson student account or create your account. For Instructors creating a Student account, do not use your instructor credentials.
3. Select any available access option, if asked.
    - Enter a prepaid access code that came with your textbook or from the bookstore.
    - Buy instant access using a credit card or PayPal.
    - Select Get temporary access without payment for 14 days.
4. Select Go to my course.
5. Select Bio4010_Spring2025_Peixoto from My Courses.

If you contact Pearson Support, give them the course ID: peixoto39351

To sign in later:

1. Go to https://mlm.pearson.com.
2. Sign in with the same Pearson account you used before.
3. Select Bio4010_Spring2025_Peixoto from My Courses.