

Biol 3144 – Physiology Lab

Course Syllabus – Spring 2024

Tuesday or Thursday 2:00 – 4:50 pm BEP 128

Course Instructor: Dr. Ryan Shartau

Course Graduate Teaching Assistant: Matthew Richards-Perhatch

COURSE DESCRIPTION

This laboratory course will provide students with the opportunity to develop their knowledge of the principles of human and animal physiology through hands-on and computer-based exercises. Labs will cover topics addressed in lecture (Biol 3343). Attendance is required and will be taken weekly (this will account for 10% of your grade).

REQUIRED COURSE MATERIAL

Human Physiology Experiments Vol 1 & 2; Vernier (will be provided at no cost)

PhysioEx 10.0: Laboratory Simulations in Physiology, Access Code Package (~ \$30).

You will need to use the link below for purchasing an access code for PhysioEx, not a print book or an e-book, just an access code which you will use to login at the link below as well. Bookstore should be carrying an access code if you prefer for any reason.

https://media.pearsoncmg.com/bc/bc_0media_ap/physioex//10/login/sign-in.php?dest=https://media.pearsoncmg.com/bc/bc_0media_ap/physioex/10/index.php

You will always visit the website above to sign in and complete your assigned lab exercises. You would then upload it directly to Canvas. This is a short Video on how to use PhysioEx

<https://www.screencast.com/t/pat0skPchWVL>

GRADING POLICY: Weekly assignments will consist of fill in the blank/short answer questions located within the lab manual that you will complete and submit on Canvas. You will turn these in by the following lab. Late assignments will not be accepted. These **assignment** scores will compose **30%** of your overall grade. A **midterm** and **final exam** will be given comprising **30%** each towards your overall grade. The remaining **10%** of your grade will be **attendance**. Attendance will be taken weekly and you must attend 8 of the 9 in-person labs (there is one virtual lab that is not included in the attendance) in order to pass the lab.

Failure to attend at least 8 labs will result in a maximum grade of 50% for the lab

TENTATIVE LAB SCHEDULE

Week	Date	Lab exercise
1	Jan 16/18	No lab
2	Jan 23/25	Introduction and cell transport PhysioEx 1: Cell Transport Mechanisms and Permeability (Due Jan 30/Feb 1)
3	Jan 30/Feb 1	Neurobiology PhysioEx 3: Neurophysiology - Nerve Impulses (Due Feb 6/8)
4	Feb 6/8	Muscle physiology PhysioEx 2: Skeletal Muscle Physiology (Due Feb 13/15)

5	Feb 13/15	Cardiovascular physiology PhysioEx 5: Cardiovascular Dynamics (Due Feb 20/22) PhysioEx 6: Cardiovascular Physiology (Due Feb 20/22)
6	Feb 20/22	Blood PhysioEx 11: Blood Analysis (Due Feb 27/29)
7	Feb 27/29	Respiratory system I PhysioEx 7: Respiratory System (Due Mar 5/7)
8	Mar 5/7	Midterm exam (Intro/cell transport, neurobiology, cardiovascular, & blood labs)
9	Mar 12/14	Spring Break – no labs
10	Mar 19/21	Respiratory system II PhysioEx 10: Acid-Base Balance (Due Mar 26/28)
11	Mar 26/28	No in-person lab Digestive physiology PhysioEx 8: Chemical and Physical Processes of Digestion (Due Apr 2/4)
12	Apr 2/4	Endocrine physiology and metabolism PhysioEx 4: Endocrine System Physiology (Due Apr 9/11)
13	Apr 9/11	Renal physiology PhysioEx 9: Renal System Physiology (Due Apr 16/18)
14	Apr 16/18	Review – no lab exercise
15	Apr 23/25	Final Exam (respiratory, digestive, endocrine, & renal labs)

Important Dates:

Jan 15 – MLK Day (no class)

Mar 11-15 – Spring break (no class)

Mar 25 – Final date for dropping with a W

April 29 – May 3 – Final exam period

***** I reserve the right to make changes to this schedule throughout the semester but I will inform you of any changes in a timely fashion *****

Letter grades will be assigned according to the following scale:

A: >90; B: 80-89.9; C: 70-79.9; D: 60-69.9, F: <60.

CLASS EXPECTATIONS AND ACADEMIC MISCONDUCT:

Students will be expected to follow the University of Texas at Tyler Honor Code.

Submitting plagiarized work to meet academic requirements including the representation of another's work or ideas as one's own; the unacknowledged work for word use of another person's ideas; and/or the falsification, or dishonesty in reporting research results shall be grounds for charges of academic misconduct. Any cheating or other types of academic misconduct will be reported to the university administration and at minimum will result in automatic failure of the course.

Use of electronic devices (e.g. phones, tablets, smart watches, etc) during exams is strictly forbidden.