HUMAN PHYSIOLOGY LAB
ZOOLOGY 2235-004, Lab Sec. 007 & 008
SPRING 2019

Professor: Sandra Lehmann Vierra, MPH
E-mail: slehmannvierra@csustan.edu
Phone: 209-667-3838 (prefer email)
Blackboard
Office Hours: Room N252, Tu 12pm-1:50pm

Note: Students are responsible for reading and knowing the information within this syllabus. If it is in the syllabus, do not ask the question; you will be referred back to the syllabus. The instructor reserves the right to make changes to the syllabus, points, and grading scale as necessary.

Required Material

- Biopac Student Laboratory Guide, Biopac Systems Inc. (Blackboard)
- Individual lab assignments and worksheets (Blackboard)
- Lab notes on Blackboard
- Recommended: basic calculator, 3-ring binder, colored pencils, regular pencil
- Two 100-question exam scantrons
- Access to and simple proficiency with computers

Course Description

Zoology 2235 is an in depth study into the functions of the human body. It covers physiological systems, with extended detail on metabolism, nerves, muscles, cardiovascular, respiratory, and urinary functions. For students desiring to enter nursing program or kinesiology. Course Prerequisites/Requirements: BIOL 1010/1020 or BIOL 1050. Grade of C or better in ZOOL 2250 and Human Anatomy.

Spring 2017: Lab Sec. 007 -— Tu 9:00am-11:50pm in N229
Lab Sec. 008 -— Tu 2pm-4:50pm in N229

Course Objectives

Students will:

1. Describe how the body works, from the molecular level to organ systems, and the whole body..
2. Explain the importance of physiology in modern medicine.
3. Examine the role of the scientific method in the study of physiology as it relates to evaluating evidences and drawing logical conclusions.
6. Examine the tissue level of organization and interpret the role of tissues in human systems.
7. Compare and contrast the location, organization and function of the four basic classifications of human tissues.
8. Define homeostasis and explain how this concept is used in physiology and medicine.
9. Describe the nature of negative and positive feedback loops and explain how these mechanisms act to maintain homeostasis.
10. Distinguish between intrinsic and extrinsic regulation and the roles of nervous and endocrine systems.
11. Examine and describe the major features and functions of the cardiovascular, respiratory, muscular, digestive, immune, reproductive, and renal systems and their contributions to homeostasis.
12. Describe the relationship between homeostatic imbalance and diseases in each of the organ systems.

Course Policy, Student Conduct, and Expectations

- **Lecture Policy:** Courteous behavior is expected at all times. The expectations are basic.
  - Arrive on time to class. Coming in late is disrespectful. Two tardies equal one absence.
  - Respectful and positive attitudes toward all people.
  - No private talking or other disturbances during lecture, otherwise you will be asked to leave class.
  - All cell phones on silent during class. **Cell phones must be off and be completely out of sight during exams**.
  - Computers are allowed in class, but you are on the honor system. Focus on listening in lecture.
  - Computer usage outside of class is MANDATORY. All students have access to computers and internet on campus.
  - Students must attend lecture. Attendance will be taken. It is the student's responsibility to notify the instructor of unavoidable absences as soon as possible so that the matter can be discussed.

- **Reasonable Accommodations:** If you have a verified physical, medical, psychological, or learning disability or perhaps you feel you may have one of these disabilities which impact your ability to carry out assigned course work, please contact the Disability Resource Services (DRS) office. DRS staff will review your needs and determine what accommodations are necessary and appropriate. All information and documentation is confidential. DRS is located in the Mary Stuart Rodgers Bldg. Room MSR 210, phone (209) 667-3159. DRS students MUST take all exams by the day of the scheduled exam.
- **Recording Policy**: Audio or video recording of classes (tape and digital format) or use of cameras/ phones to photograph or record lectures is not permitted. An exception is made for students registered with Disability Resource Services, who are approved for this accommodation. In such exceptions, DRS students will be asked to sign a "Recording Agreement" which disallows them from sharing recordings with other individuals unless approved by the DRS program.
- **Academic Honesty:** Exams, reports, and presentations are indicators of individual performance. Copying off another student's exam, plagiarized reports, presentations or papers constitutes cheating. There is zero tolerance for cheating. Cheating in any capacity in this class will result in penalties ranging from a minimum of a zero on the assignment or exam to a maximum of expulsion from California State University, Stanislaus as indicated by the official University Policy regarding dishonesty and misconduct.
- **Assessment Method**
  - Students must provide scantrons when expected and will be required to use the computer.
  - MAKE-UP EXAMS ONLY IN EXTREME CASES! In case of jury duty or other legal responsibility, verification will be required. In case of severe illness or death in immediate family, verification will also be required. Approved make-ups must be taken within the week of the exam.
- **Laboratory Evaluations**
  - **Lab Assignments**: Each lab corresponds to worksheets and a lab quiz. Completion of the worksheets allows student to take the lab quiz for points. Quizzes will be in the format of multiple choice, true/false, matching, short answer, and essay. Lab quizzes are worth 10 points each. You will take the quiz online. The best eight scores will be included in the total score of 80 points.
  - **Lab Exams**: There will be two lab exams. They will cover the designated material and are not comprehensive, although material learned earlier as a foundation is necessary. Each exam will be worth 35 points each for a total of 70 points. The exams will be in the format of multiple choice, true/false, and matching. Failure to appear at exam time without 24 hours prior notice to the instructor with an appropriate excuse, or an appropriately documented emergency, will result in zero points for that exam.
  - Total = 150 points
    - 8/12 Lab Assignments: 10 pts each for a total of 80 pts
    - 2 Lab Exams: 35 pts each for a total of 70 pts
  - Grades: The points you earn in lab will be forwarded to Professor Dulai to combine into a complete course grade. No extra credit points.
  - Note: You are responsible for reviewing your score periodically for mistakes. Any concerns or questions should be inquired about in lab time. I will not address concerns or questions about scores via email.
- **Grades of "Incomplete":**

  From The University Catalog – An Incomplete signifies (1) that a portion of required coursework has not been completed and evaluated in the prescribed time period due to unforeseen but fully justified reasons beyond the student's control, and (2) that there is still a possibility of earning credit. It is the responsibility of the student to bring pertinent information to the attention of the instructor and to determine from the instructor the remaining course requirements which must be satisfied to remove the Incomplete. The conditions for removal of the Incomplete shall be put in writing by the instructor and given to the student, with a copy placed on file with the department chair. A final grade will be assigned when the work agreed upon has been completed and evaluated.

  Any Incomplete must be made up within the time limit set by the instructor; in any case, no more than one calendar year following the end of the term in which the Incomplete was assigned. An Incomplete should never be used to (1) give a failing student an opportunity to redo unsatisfactory work or complete additional work; or (2) give a student more time to complete his/her work when the reasons for the delay have been within his/her control. This limitation prevails whether or not the student maintains continuous enrollment. Failure to complete the assigned work will result in an incomplete reverting to a grade of NC for grading options 1 and 2, and to a grade of IC for grading option 3. (See

the Academic Standards section of this catalog and the Schedule of Classes Informational Guide for grading options.)

In cases of prolonged illness or any emergency which necessitates an extension of time to complete the course, the student may petition through the academic department where the course was offered. Students may not be permitted to graduate until all Incompletes are removed or evaluated as "IC" grades. Students are not to reregister in courses in which they have an Incomplete.

EIGHT HABITS TO PRACTICE IN ORDER TO SUCCEED IN BIOLOGY

1. **Prepare for Class,** Complete reading assignments and online work before you come to lecture and lab. This is VERY important. Reading and hearing the terms and concepts will aid comprehension and help with in class discussions.
2. **Attend all classes AND take notes.** Successful students never miss class except in a dire emergency. It is essential for mastery of material that you read it, hear it, discuss it, and apply it. Taking additional notes will help you focus during class.
3. **Review your notes nightly.** Re-write, modify, and expand your notes within 24 hours of a lecture. Use mind-mapping, charts, summary tables, and doodling to help you to understand concepts.
4. **Be proactive and form a study group or attend tutoring.** For many people, learning is social. It can help to explain material or think through problems posed in class. Talk to people around you and find a group that you think will benefit your learning. Challenge each other to apply the concepts we discuss. It will help you build concepts.
5. **Ask questions.** Don't be shy. Feel free to contact the instructor if you have any questions. You may also ask for help from your fellow students on Facebook. If you do not understand something, chances are that someone else has the same question. Stop the instructor and ask questions in lecture or lab. Go to office hours.
6. **Find your learning style.** We all learn differently and at different rates. Identify the techniques that help you learn best. Most of us are a mixture of visual, tactile, auditory, social, read/write learners. Using your learning strength will help you in this class and throughout your college career. Check out www.vark-learn.com to learn more about your own approach to learning.
7. **Do not fall behind.** The pace in this class is fast. We cover a lot of material in lecture, in lab, and with homework assignments. Keep up with your reading and lab write-ups. Remember you are learning a new language. Cramming does not work. Only you can put in the time that will lead to a deep understanding. Understanding translates into a good grade.
8. **Make it about learning**; … not about getting a good grade. If you focus on understanding, the grades will follow.

Tentative Schedule of Assignments

WEEK 1 (01/29)
Lab 1 - Lab Orientation & Physiological Data

WEEK 2 (02/05)
Lab 2 - Diffusion & Osmosis

WEEK 3 (02/12)
Lab 3 - Plasma Glucose Determination

WEEK 4 (02/19)
Lab 4 - Action Potential Exercise

WEEK 5 (02/26)
Lab 5 - Senses & Reflexes

WEEK 6 (03/05)
Lab 6 - Integrated Nerve Pathways

WEEK 7 (03/12)
Lab 7 - **LAB EXAM 1**

WEEK 8 (03/19)
NO LAB (03/19) — SPRING BREAK

WEEK 9 (03/26)
Lab 8 - The Electromyogram

WEEK 10 (04/02)
Lab 9 - Cardiovascular Reflexes & the EKG

WEEK 11 (04/09)
Lab 10 - Pulmonary Volumes & Capacities

WEEK 12 (04/16)
Lab 11 - Renal Salt & Water Balance

WEEK 13 (04/23)
Lab 12 - Acid-Base Balance

WEEK 14 (04/30)
Lab 13 - Exercise Physiology &. Nutrition Video [The Bitter Truth]

WEEK 15 (05/07)
Lab 14 - **LAB EXAM 2**

WEEK 16 (05/14)
FINALS WEEK