

**ZOOL 2235: HUMAN PHYSIOLOGY LAB**Spring 20  
19 Syllabus**LECTURE:** Human Physiology Lab 2235  
**PLACE:** Naraghi 229  
**TIME:** M 9:00 am - 11:40 am (2 hours 40 minutes)**TEXTBOOK:** *None. PDFs & Handouts shall be supplied as needed***INSTRUCTOR:** Dr. Kamal Dulai                      **Office Hours:** Tu&Th 2:15pm-3:15pm; Also by appointment  
**Phone:** 209 607 0304  
**Email:** [kdulai@csustan.edu](mailto:kdulai@csustan.edu)  
**Office:** N 251**INTRODUCTION**

The purpose of Zool 2235 is to provide students with a basic understanding of how organ systems function in concert to maintain whole body homeostasis in a laboratory setting. Physiology describes how biological systems respond to endogenous and exogenous perturbations to maintain homeostasis. The inability of the body to maintain homeostasis of a particular function often leads to a pathological condition described by the discipline of pathophysiology. To understand the pathophysiology of certain conditions, it's imperative that students learn how the system works under natural, controlled (unperturbed) conditions. This mandatory lab shall help enforce many of the concepts presented in class. This course is also a gateway to many of the health-related careers.

**POLICIES & PROCEDURES**

Please carefully familiarize yourself with the policies below. It shall be assumed that you have read and understood them.

**SCORES & GRADES****Course Scoring:**

<b>Assignment</b>	<b>Point Allocation</b>	<b>Total Points</b>	<b>% of Total Points</b>
Standard Lab Write-ups	100 lab points each x 6	600	86%
Lab Exam 1	50 points x 1	50	7%
Lab Exam 2	50 points x 1	50	7%
	<b>Total</b>	<b>700</b>	<b>100%</b>

- From arrival time to permission to depart.

**Letter Grades:** The point score shall be transferred to you lecture instructor.

Information on grade appeals, incompletes, etc. can be found in the *CSUStan Grading Policy* available from the Registrar.

**COURSE SPECIFIC POLICIES**

**Lab Work:** Please note that lab attendance is **mandatory**. **Missing two labs without proper documentation will fail you from this class.**

**The instructor shall ONLY grade six (6) reports, although you will be responsible for submitting all reports.**

This course requires weekly laboratory meetings. However, the format of these labs is not the same from week to week. In lab, although you will work collectively in groups of three, the written work you submit must follow the following guidelines set by us. **Each report must be written independently by each student.**

You will be required to sign a waiver of liability form, but nothing we do is hazardous to your health!

In addition, there will be computer assignments given during lab time. These are to be completed as a group and will count as part of your grade. Any computer exercises not completed will result in the appropriate penalty.

**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 50 points each for a total of 100 points. The exams will be in the format of multiple choice, true/false, and word bank. Bring a green Scantron form for each. 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.

**Note: Penalties:** twenty five percent (25%) of the points shall be deducted from lab assignments turned in after the **start** of the lab period on the day they are due. Lab assignments will not be accepted more than one week after the due date (at the start of lab). Students are required to attend the lab from the start time until they are dismissed by their instructor. If you leave early you shall be marked absent for that entire lab.

If you must miss a lab for an acceptable reason, let us know ahead of time. If you do not inform us in advance, you may receive a zero for the lab. If you do inform us ahead of time and have an acceptable reason for missing class, you will need to arrange to access the data for that lab and still submit the required report. Your lab write up will be due at the start of the section in which you are enrolled the following week. Thus, you may have less than the standard 7 days to complete the report, under these circumstances.

In any event, **every student must complete all lab write-ups**, irrespective of the nature of their excuses, by the conclusion of this course, or they will receive a failing grade at the conclusion of the semester. **No exceptions.**

**DO NOT MAKE PLANS DURING THE COURSE OF THE SEMESTER FOR OTHER EVENTS.**

## GENERAL

### **Course Participation:**

Participation in this course is strongly encouraged. It helps students and teaching staff clarify material, and promotes scientific dialogue. Scientific data clearly shows that attendance and participation do benefit student understanding and do positively influence student grades. Typically, students who succeed attend lab on a regular basis. Students are expected to attend all labs. Note that students are responsible for any material discussed in their absence, and for determining if any further assignments have been posted.

For students whose final scores fall right on the border of a grade change (ex. A-/B+), active engagement and participation in the course **may** increase your chances of receiving the higher score. *This would be exclusively at the discretion of the instructor.*

### **Lab Course Materials and Handouts:**

In addition to the class handouts, computer and internet access shall be required for this class. For students who do not otherwise have access to a computer or the internet, computers **may** be available at several campus locations including the main reading room in the library. Copies of the Lab Protocols will also be available in Acrobat format (.pdf files) at the ZOOLOGY 2235 BLACKBOARD site.

### **Electronic Aids:**

The use of electronic devices is prohibited during exams and assessments. The only exception shall be simple calculators, which must be declared and checked by the staff prior to use. No cell phones (or cell phone calculators), no iPads, or any other electronic devices are permitted. Leave all cell phones in your bags during examinations and tests (best not to bring them for security reasons). **Turn any ringers off!**

During other periods, please prevent your electronic devices from interfering with instruction. If you must take a phone call, please have the courtesy to step out. The use of electronic aids to circumvent the spirit of any assessment is a very serious violation of policy, and is not permitted.

### **Regrade policy:**

Regrade requests will only be accepted within **one week (7 days)** from the date a scored assessment is returned. For each question requiring attention, you must submit a written explanation describing why you believe your response should be reevaluated. Please know we reserve the right to regrade your **entire assessment**. Thus, your score could either increase or decrease.

**BEWARE:** A random sample of all assessments will be photocopied after initial grading. If a comparison of the photocopy to the exam submitted for regarding indicates any alteration, the case will be forwarded to the Office of Judicial Affairs. **Never alter any exam, quiz, or other assessment material returned to you.**

**Student Services:**

There are many resources on campus. For more information please visit, <http://www.csustan.edu/tutoring/>. Tutoring Services are in the Library building, room L112. Every student should make an effort to visit with them and at a minimum have understanding of what services are available.

Student and faculty tutors, who have previously passes this class or administered similar material, are available from 8 am – 6 pm daily. This resource is available to all and is in room Naraghi 124. No appointment is necessary and walk-ins are most welcome.

In addition, there is The Biology Club, which encompasses a group of former/present biology students who are available for consultation and advice. Check with the Biology Office in Naraghi Hall.

**Disability Services:**

If any student with any form of learning disability wishes or has registered for this course, they should contact the instructor as soon as possible so rapid arrangements can be made to address those needs. CSU Stan and this instructor are committed to making our courses accessible to all students, including students with limited mobility, impaired hearing or vision, and learning disabilities. Students who may need academic accommodation(s) services should visit the Disability Services web site at <http://www.csustan.edu/drs/contactus.html> and also contact the Disability Services Coordinator at the Disability Resource Services office (209) 667-3159 located in the Mary Stuart Rodgers Educational Services Gateway, Room MSR 210 or visit <http://www.csustan.edu/drs/> as early as possible in the semester so that appropriate arrangements can be made.

**Group and independent assignments in ZOOL 2235:**

Some activities in ZOOL 2235 involve group work and we encourage you to discuss any of the materials in the text, lectures, and/or discussion sessions with the instructors and other students, **but the work you submit must be your own for all of the following:**

- Lab reports (as specified)
- Assessments

That is, each student must generate their own answers **written in their own words** to all written questions. At the first instance of copied answers on assignments, no credit will be given *to all students with duplicate answers* and the assignments will be forwarded to the Vice-Chancellor for Undergraduate Affairs and the Office for Judicial Affairs. Subsequent copied assignments could lead to dismissal from course or the university (see section on Academic Integrity below).

**Academic integrity:**

Academic integrity is the foundation of an academic community and without it none of the educational or research goals of the university can be achieved. All members of the university community are responsible for its academic integrity. Existing policies forbid cheating on examinations, plagiarism and other forms of academic dishonesty. The current policies for CSU Stanislaus are described on the *Student Responsibilities web site pages* and also available from your instructor. The following general guidelines are adapted from Office of Judicial Affairs ([www.csustan.edu/JudicialAffairs/.../Student\\_Judicial\\_Process-Academic.pdf](http://www.csustan.edu/JudicialAffairs/.../Student_Judicial_Process-Academic.pdf)):

**Examples of academic dishonesty include:**

- receiving or providing unauthorized assistance on examinations
- using unauthorized materials during an examination
- plagiarism – using materials from sources without citations
- altering an exam and submitting it for re-grading
- fabricating data or references
- using false excuses to obtain extensions of time or to skip coursework

The ultimate success of a code of academic conduct depends largely on the degree to which the students fulfill their responsibilities supporting academic integrity.

These responsibilities include:

- Be honest at all times.
- Act fairly toward others. For example, do not disrupt or seek an unfair advantage over others by cheating, or by talking or allowing eyes to wander during exams.
- Take group as well as individual responsibility for honorable behavior. Collectively, as well as individually, make every effort to prevent and avoid academic misconduct, and report acts of misconduct that you witness.
- Do not submit the same work in more than one class. Unless otherwise specified by the instructor, all work submitted to fulfill course requirements must be work done by the student specifically for that course. This

means that work submitted for one course cannot be used to satisfy requirements of another course unless the student obtains permission from the instructor.

- Unless permitted by the instructor, do not work with others on graded coursework, including in class and take-home tests, papers, or homework assignments. When an instructor specifically informs students that they may collaborate on work required for a course, the extent of the collaboration must not exceed the limits set by the instructor.
- Know what plagiarism is and take steps to avoid it. When using the words or ideas of another, even if paraphrased in your own words, you must cite your source. Students who are confused about whether an act constitutes plagiarism should consult the instructor who gave the assignment.
- Know the rules – ignorance is no defense. Those who violate campus rules regarding academic misconduct are subject to disciplinary sanctions, including suspension and dismissal.

**Flexibility Clause:**

Circumstances may arise during the course which may prevent the staff from fulfilling every component of this syllabus; therefore, the syllabus may be subject to small adjustments. Students will be notified prior to any changes, if possible.

**Welcome & Great Learning!**

## **Tentative Schedule of Assignments**

WEEK 1 (01/29)

Lab 1 - Lab Orientation & SI Units, Cell Organelles Worksheets

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 – No Labs**

## **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](http://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;

\*from Sandra Lehmann Vierra, MPH