

Zoology 4280: Physiology of Human Systems

Spring 2018; section 001-003

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Office Hours: MW 10-11:00

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Lecture (001): MWF 9:00-9:50, N104

Lab (002): M 2:00-4:50, N229

(003): W 2:00-4:50, N229

Prerequisites: BIOL 3310** and CHEM 3010/3012, or equivalents.

Required Materials:

1. *Anatomy and Physiology* is an open source book available to view online or download as a PDF here: <https://openstax.org/details/books/anatomy-and-physiology> You may also pick up a copy in the bookstore or order a hard copy online.
Publisher: OpenStax College; 1st edition (January 1, 2013)
ISBN-10: 1938168135
ISBN-13: 978-1938168130
2. Dissection Kit (Amazon has a good one)

Course Policies: Students are expected to attend all lectures and lab sessions. Please arrive ON TIME, and limit getting up during lecture to emergencies only. You will not be awarded any points that your lab group earns in your absence. Poor attendance is highly correlated with a less than optimal final grade!

*Missing class during week one will result in your being dropped from the course to make room for anyone on the waiting list that is present.

Use of audio or video recording equipment is not allowed without prior arrangement through Disability Resource Services, and pictures of animal subjects are not allowed under the policy set by the Institutional Animal Care and Use Committee.

Blackboard: We will use Blackboard heavily in this course, if you are not experienced with this site, please take some time to familiarize yourself with how it functions.

- 1) Lab Safety Course: You will be assigned the BioLab safety course on Blackboard (2016-2017-BioLabSafety: BioLabSafety). **If this is on your course list, it must be completed with a 100% score by February 2nd or you will be dropped from the course!**
- 2) All lab assignments will be facilitated by BlackBoard. Lab exercises and reports can be downloaded and turned in under 'assignments' on the course page.
- 3) Lecture slides will be posted as a pdf file FOLLOWING each lecture session.

Exams: Five 100 point in-class exams will be given. These exams will focus on problem solving and short descriptive essay questions.

*****NO MAKEUP EXAMS WILL BE GIVEN*****

You must have a serious and compelling reason that can be documented in order to miss an exam, should this occur, the student and professor will develop a plan of action that best suits the circumstances of the absence.

Lab: Lab meets once per week and attendance is mandatory. Unexcused absences from lab will result in a zero for that week. You will be associated with a group of three for the entire lab, and all assignments will be turned in as a group. Lab exercises are available on BlackBoard (Section 002/003) for download and must be turned in electronically; no paper lab reports will be accepted. Final Lab reports are due posted on Bb by 11:59 pm on Tuesday for section 002 and Thursday for section 003. The lab report logistics will be covered during an orientation on the first day. Each lab report is worth 10 points. The final score for lab will be based on a percentage of total points/2, for a maximum of 50 points possible. ALL assignments are subjected to anti-plagiarism software when submitted. There are no lab exams, so lab material will be covered by the Exams given in lecture.

Note: At least one of our labs will involve the use of an animal subject, please be prepared for this. Working with live animals requires attention to detail and focus by all students, while at times some lab activities may be loud and collegial, even light-hearted, students are asked to take working with live animals very seriously and respectfully. Anyone witnessed by the instructor or another student making light of, or engaging in disrespectful behavior toward, the animals used in the lab will be asked to leave and not come back. This will result in a failing grade; experimental animals deserve our respect and anything less than 100% seriousness in this respect will not be tolerated.

Evaluation:

Five Exams (100 each)	500
Group Lab Reports (% of total/2)	50
Total Cumulative Points:	550

Grading: A percentage of total points will be calculated, and the following scale used:

A: 100-93; **A-:** 92-90; **B+:** 89-87; **B:** 86-83; **B-:** 82-80; **C+:** 79-77; **C:** 76-73; **C-:** 72-70; **D+:** 69-67; **D:** 66-60; **F:** 59-0

- These cut offs are absolute, please do not ask to be bumped up, or for extra credit points, after the course because you are close to the line.
- The CR/NC grading option is not approved for this course; only letter grades can be earned.

Course Drop and Withdrawal Policy

Withdraw after the census date can only be done with a documented serious and compelling reason. The Department of Biological Sciences chair will not sign a withdrawal form otherwise, regardless of the instructor's view. It is highly recommended that if you wish to drop the class, you do so by the census date! A grade of "incomplete" will not be considered under any circumstance, you may petition for a withdrawal if a serious and compelling reason is given.

Academic Dishonesty: There will be a zero-tolerance policy for academic dishonesty, this includes, but is not limited to, cheating, plagiarism, and use of course materials in an inappropriate manner such as posting online. Violating this policy will result in a failing grade for the course and referral to the Student Judicial Affairs Office. See University code of conduct for more info: <http://www.csustan.edu/judicial-affairs/student-responsibilities>

Tentative Schedule:

Date	Day	Lecture	Chapter	Lab
26-Jan	F	Course Introduction		
29-Jan	M	Homeostasis	1	Lab Orientation
31-Jan	W	Tissues	4	Intro to Physiological Study
2-Feb	F	Energy and Enzymes		
5-Feb	M	Transport	24	Membrane Transport
7-Feb	W	Metabolism		
9-Feb	F	EXAM I		
12-Feb	M	Nervous System	12	Compound Action Potentials
14-Feb	W	Neurons and Synapses	12	
16-Feb	F	Neural Modulation	12	
19-Feb	M	Autonomic Nerves	15	Integrated Nervous Function
21-Feb	W	Senses	14	
23-Feb	F	Muscle Tension	10	
26-Feb	M	Muscle Contraction	10	Muscles and Reaction Times
28-Feb	W	Muscle Metabolism	10	
2-Mar	F	EXAM II		
5-Mar	M	Cardiovascular Overview	18	An Intro to CV Physiology
7-Mar	W	Cardiac Physiology	19	
9-Mar	F	Cardiac Cycle	19	
12-Mar	M	Cardiodynamics	20	EKG, Pulse and Blood Pressure
14-Mar	W	Cardiodynamics	20	
16-Mar	F	Fluid Exchange and Lymph	20	
19-Mar	M	Pulmonary Ventilation	22	Pulmonary Capacities and Function
21-Mar	W	Gas Transport	22	
23-Mar	F	Gas Transport	22	
26-Mar	M	Respiratory Reflexes	22	No Labs
28-Mar	W	EXAM III		
30-Mar	F	<i>Holiday-No Class</i>		
2-Apr	M	<i>Spring Break</i>		
4-Apr	W			
6-Apr	F			
9-Apr	M	Overview of Digestion	23	The Electrogastrogram
11-Apr	W	Digestive Functions	23	
13-Apr	F	Mechanisms of Absorption	23	
16-Apr	M	Mechanisms of Absorption	23	Digestive Enzyme Activity
18-Apr	W	Overview of Renal Phys	25	
20-Apr	F	Renal Filtration	25	
23-Apr	M	Reabsorption and Secretion	26	Salt and Water Balance
25-Apr	W	Salt and Water Balance	26	
27-Apr	F	EXAM IV		
30-Apr	M	Endocrine System	17	Respiration and Acid/Base
2-May	W	Hormones and Mechanism	17	
4-May	F	Integration	17	

7-May	M	Metabolic Rate	24	Exercise Physiology
9-May	W	Metabolic Functions	24	
11-May	F	Insulin and Diabetes	24	
14-May	M	Cholesterol Balance	24	No Labs
16-May	W	Medical Physiology		

Final Exam (**Exam V**) is scheduled for Monday May 21st at 0830

Don't Fall Behind! This is a difficult course due to the material, and it builds on itself as we go day by day, therefore, it is highly recommended that you study the material from one lecture PRIOR TO THE NEXT. Skipping lectures, or putting off studying will result in you getting lost very quickly.

****Make sure you have a reasonably good grasp of the material in the prereq courses; the approach in 4280 assumes you understand cell/molecular biology, general chemistry, and organic chemistry at a high level. If you keep up with the material, you will do much better and enjoy the course much more!!**

YOU are responsible for YOUR education, but do not hesitate to get help when needed... Good Luck!