

Biology 5610 Comparative Animal Physiology Lab

Fall 2016

Instructor:

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344 BNR

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Office hours: By appointment

**The door to my lab is always closed due to fire regulations. Don't hesitate to come in and find me, unless there actually is a fire.*

Lab Book and Materials:

No required lab book. Weekly readings and assignments will be posted on Canvas at least one week prior to the lab.

Pre-requisites:

Either have already taken or being currently enrolled in the Animal Physiology Lecture Course (5600) or another physiology course.

Course Objectives:

- Learn physiological concepts in an interactive manner
- Acquire basic laboratory techniques
- Increase proficiency in analyzing and presenting data
- Improve scientific writing proficiency
- Develop speaking and presenting skills

Important Lab Information:

- No food, drinks, cell phones, or music devices are allowed in lab
- Wash your hands thoroughly at the end of lab
- Respect the animals used during lab
- ***Bring a USB memory stick to backup your data and take it with you***
- Bring your printed and stapled lab report to lab each week; emailing your lab reports to the instructor is not acceptable.
- This course requires a lab fee that is used to purchase lab supplies

Lab Attendance Policy

You are expected to attend all scheduled labs, participate in lab exercises, and contribute to setup and cleanup. Excused absences include (but are not limited to): serious illness, death in the family, school-sanctioned event, graduate/medical school interviews. Any excused absence must be prearranged as soon as possible so you can make up the lab, if it is possible given the restraints of the specific lab.

Date	Lab	Assignment Due
Sept 9/10	Course Introduction LabScribe Tutorial Lab 1. Human Reflexes and Response Times	
Sept 16/17	Lab 2. Human EKG	Reading Assignment Lab 1. Short lab report (Abstract, Methods, and Results Due)
Sept 23/24	Lab 3. Mouse and Snake Dissections Statistics Overview	Lab 2. Short lab report (Introduction and Results Due)
Sept 30/ Oct 1	Lab 4. Respiration	Lab 3. Questions Statistics Assignment
Oct 7/8	Lab 5. Stress and Immune Physiology ¹	Lab 4. Short lab report (Discussion and Results Due)
Oct 14/15	Lab 6. TTX ²	Lab 5. Questions ¹
Oct 21/22	Lab 7. Human EMG	Lab 5. Lab Report ¹ Lab 6. Questions ²
Oct 28/29	Lab 8. Frog Gastrocnemius Muscle Weight and Work	Lab 6. Lab Report ² Lab 7. Questions
Nov 4/5	Lab 9. Frog Heart Muscle Contractions ³	Lab 8. Questions
Nov 11/12	Lab 10. Osmoregulation ⁴	Lab 9. Questions ³
Nov 18/19	Lab 11. Human Touch and Pain Receptors	Lab 9. Lab Report ³ Lab 10. Questions ⁴
Nov 25/26	Thanksgiving (No class)	Lab 10. Lab Report ⁴
Dec 2/3	Class Presentations	Lab 11. Questions
Dec 9/10	Class Presentations (If needed)	

Superscript numbers indicate that **either the lab report or question assignment is due.*

Grading:

	Points per assignment	Total Points
Quizzes (10)	10	100
Reading assignment	25	25
Statistics assignment	25	25
Short lab reports (3)	25	75
Lab Questions (5)	25	125
Lab Reports (2)	100	200
Final Presentation	50	50
Total		600

A 93-100%	B- 83-86%	C- 70-72%	F below 64%
A- 90-92%	C+ 77-79%	D+ 67-69%	
B+ 87-89%	C 73-76%	D 64-66%	

Quizzes will be given in the first 10 minutes of every class period. If you arrive late for class, you will be unable to take the quiz for that class period. Since you will take 11 quizzes, and only 10 will count for your overall grade, the lowest score will be dropped. Quizzes will cover both the previous and current week's lab.

Short lab reports will be assigned for the first 3 labs to enable each student to get feedback on the structure and material within each report section. We will go over each section in detail the week before the section is due.

Lab reports—Each student will be required to write 2 full lab reports (abstract, introduction, materials & methods, results, discussion, literature cited). You have four possible labs to write these reports. They are denoted in the schedule as a superscript number. Lab reports are due two weeks after the lab. It does not matter which of those four you write, and if you write more than 2, your highest grade will be used. *If you write a lab report, you are not required to answer the lab questions unless you have already turned in 2 lab reports. In that case, you must do both the lab report and lab questions.*

Lab Questions will be required for all labs, unless you are writing a lab report for that specific lab. They are due the week after the lab. You will be required to perform statistical analyses, present graphs, and answer conceptual questions for each of these assignments. There are 6 sets of lab questions, but only 5 will be counted towards your final grade.

Reading and statistical assignment—These two short assignments will expose and/or remind you of the basic structure and style of lab reports and how to conduct basic statistical analyses.

Assignments, lab reports, and lab questions are due at the beginning of each lab (no excuses, please!). They must be printed and stapled. Ten points will be deducted for every day they are late. Reports handed in at the end of class will be considered a day late and will therefore be subject to the ten point penalty.

Research presentation—as your “final,” you will be required to read a current paper that exemplifies physiological research. The topic will be of your choice. You will give a 5 minute presentation to your peers during the final class period.

Extra credit will be available two times during the semester (maximum 10 points). I will tell you of opportunities to complete this as they arise throughout the semester.

Working with live animals: In this lab, we will be working with a variety of organisms. You are required to treat them with respect and care. Individuals that do not comply with this will receive a zero for that specific lab. All of the procedures and experiments that we conduct have been approved by the Utah State University Institutional Animal Care and Use Committee (IACUC).

ADA Compliance: Students with impairments of any type may be eligible for reasonable accommodations in accordance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973. All accommodations are coordinated through the Disability Resource Center (DRC) in Room 101 of the University Inn, 797.2444 voice, 797.0740 TTY, or toll free at 1.800.259.2966. Please contact the DRC as early in the semester as possible. Alternate format materials (Braille, large print, or digital) are available with advance notice.

Plagiarism: ...includes knowingly ‘representing, by paraphrase or direct quotation, the published or unpublished work of another person as one’s own in an academic exercise or activity without full and clear acknowledgment. It also includes the unacknowledged uses of materials prepared by another person or agency engaged in the selling of term papers or other academic materials.’

Plagiarism will NOT be tolerated. This includes cutting and pasting from websites, books, journals, or any published materials. You are expected to use literature cited in your lab reports, and it can be very easy to plagiarize information. Please make sure you have a good understanding of acceptable versus unacceptable uses of other peoples’ information. Appropriate and inappropriate uses are discussed further in the “How to Write a Lab Report” handout. If you are unclear, please feel free to ask me for clarification or assistance.

Non-Discrimination and Sexual Harassment Policies: Discrimination or sexual harassment against any student for any reason is not tolerable. Instances of discrimination include race, color, religion, sex, national origin, sexual orientation, gender identity, age, disability, or veteran’s status. If you feel you have been discriminated against or sexually harassed, please feel free to notify the instructor or USU’s Affirmative Action/Equal Opportunity Office for further information, advice, counseling, or clarification.