Human Physiology Lab  
(Biol 2425 - Sections 1 through 4)  
Spring Semester 2020

GENERAL INFORMATION

Instructor: David H. Temme  
Office: Bldg. 44 Room 217, Phone 801-581-8897 (Temporary office: South Biology, Room 87, no phone)  
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Teaching assistants:  
Section 1 (Thursday 12:25pm-3:30pm): Jamie McDowell, Caitlin Bubel  
Section 2 (Thursday 3:40pm-6:35pm): Erin Carroll, Kristen Wirth  
Section 3 (Friday 8:35am-11:35am): Mark Davenport, Audrey Guo  
Section 4 (Friday 11:50am-2:50pm): Steven Scott, Christian Bradley

Course Preface: The standard goal of any Human Physiology Lab is to give you the opportunity to directly measure, demonstrate and observe various physiological phenomena as they relate to the human body. But I would also like to increase the element of exploration in this lab. Truth be told, while I have taught Human Physiology for a couple of decades, last semester was the first time I was involved in the lab. And when I looked at past lab exercises, they seemed more focussed on the technical means to measure certain phenomenon, along with the statistical means to evaluate and analyze collected data sets. Both of these are important. But science is about question-driven exploration, so last semester I attempted to strengthen the exploratory nature of this lab. I did so by designing mostly new labs centered around two simple criteria: (1) The lab focusses on an interesting question (within an unknown answer) that a group of students working collectively could generate a data set that, via analysis, could help illumine some insights into the nature of the answer. (2) The lab provides a hands on exploration of some aspect of physiology that I know from experience that students often struggle to meaningfully incorporate into their way of thinking. The “problem”, of course, is that such labs are not “canned” laboratory exercises, where the way to record and analyze the data, along with the way to organize the lab report to be turned in by a certain deadline after every lab, was already set. Which further complicates the issue of how each student’s performance is going to be assessed and subsequently converted into a letter grade at the semester’s end. Yet the flip side, as gathered from the feedback from last semester’s students, is that such labs are interesting, insightful, and fun! So, if you are ready to participate fully in the second round of a relatively unstructured, cooperative, exploration, then this could be a great experience. I looking forward to seeing what we can accomplish.

Course web site: It is not yet clear if the course web site will be utilized within this class. But if it is, access to different types of course handouts will be available through the University of Utah’s Campus Information System (CIS). To access the course website log into CIS, click on “Go to This Class” for Biol 2420. From there you can download (as pdf files) the course syllabus, along with any other relevant lab handouts.

Grading:  
Grading in this class will be somewhat subjective in that all aspects of your performance in each weeks lab—including participation; aspects of lab design and implementation; data analysis, presentation, and interpretation; the strength of your conclusions; along with your insights into potential directions for future exploration—will be lumped into one assessment. Here is the basic scheme: You will receive a score from 0 to 4 after the completion of every lab. Your score from every week will then be averaged, and converted into a grade following the standard four point grading scale.

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<tr>
<th>Grade</th>
<th>Score</th>
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<tbody>
<tr>
<td>A</td>
<td>3.7 to 4</td>
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<tr>
<td>A-</td>
<td>3.5 to 3.69</td>
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<td>B+</td>
<td>3.2 to 3.49</td>
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<td>B</td>
<td>2.8 to 3.19</td>
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<td>B-</td>
<td>2.5 to 2.79</td>
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<td>C+</td>
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The first, and most obvious, aspect of this is attendance. The expectation is that you will be here every week, ready to participate. Any unexcused absence will be giving a zero for that week. On the other hand, attending lab, and effectively participating in all the basic aspects of the lab, and you will receive a 3. To score higher (3.5 or 4 are both possible), you will need to in some way go beyond just fulfilling the basic assignments. What that exactly entails will depend on the nature of the lab, and we will try to be very open as to our expectations.

TENTATIVE LAB SCHEDULE:

- Week 1: No lab meeting
- Week 2: Exploring Counting
- Week 3: Exploring Form and Function
- Week 4: Osmolarity and Osmosis
- Week 5: Investigating Biomechanics
- Week 6: Body Space Awareness/Motor Learning
- Week 7: Sound Location
- Week 8: Lateralization of Body Function-1
- Week 9: Lateralization of Body Function-2
- Week 10: Investigating the Benefits of Relaxing and Recovery (Spring Break)
- Week 11: Physics of Flow
- Week 12: Exploring Factors that Influence Heart Rate
- Week 13: Exploring the Mechanics of Breathing
- Week 14: A Chance to Provide Feedback
- Week 15: No lab meeting

UNIVERSITY POLICIES:

• **The Americans with Disabilities Act.** The University of Utah seeks to provide equal access to its programs, services, and activities for people with disabilities. If you will need accommodations in this class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, (801) 581-5020. CDS will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in an alternative format with prior notification to the Center for Disability Services.

• **University Safety Statement.** The University of Utah values the safety of all campus community members. To report suspicious activity or to request a courtesy escort, call campus police at 801-585-COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message. For more information regarding safety and to view available training resources, including helpful videos, visit safeu.utah.edu.

• **Addressing Sexual Misconduct.** Title IX makes it clear that violence and harassment based on sex and gender (which Includes sexual orientation and gender identity/expression) is a civil rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran’s status or genetic information. If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776. To report to the police, contact the Department of Public Safety, 801-585-2677(COPS).

• **Names/Pronouns.** Class rosters are provided to the instructor with the student’s legal name as well as “Preferred first name” (if previously entered by you in the Student Profile section of your CIS account, which managed can be managed at any time). While CIS refers to this as merely a preference, I will honor you by referring to you with the name and pronoun that feels best for you in class or on assignments. Please advise me of any name or pronoun changes so I can help create a learning environment in which you, your name, and your pronoun are respected. If you need any assistance or support, please reach out to the LGBT Resource Center. https://lgbt.utah.edu/campus/faculty_resources.php
• **Campus Safety.** The University of Utah values the safety of all campus community members. To report suspicious activity, call campus police at 801-585-COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message. For more information regarding safety and to view available training resources, including helpful videos, visit safeu.utah.edu.

• **Wellness.** Personal concerns such as stress, anxiety, relationship difficulties, depression, cross-cultural differences, etc., can interfere with a student’s ability to succeed and thrive at the University of Utah. For helpful resources contact the Center for Student Wellness at www.wellness.utah.edu or 801-581-7776.

• **Diversity / Inclusivity.** It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students’ learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups. In addition, if any of our class meetings conflict with your religious events, please let me know so that we can make arrangements for you.

• **Veterans Center.** If you are a student veteran, the U of Utah has a Veterans Support Center located in Room 161 in the Olpin Union Building. Hours: M-F 8-5pm. Please visit their website for more information about what support they offer, a list of ongoing events and links to outside resources: http://veteranscenter.utah.edu/. Please also let me know if you need any additional support in this class for any reason.

• **English Language Learners.** If you are an English language learner, please be aware of several resources on campus that will support you with your language and writing development. These resources include: the Writing Center (http://writingcenter.utah.edu/); the Writing Program (http://writingprogram.utah.edu/); the English Language Institute (http://continue.utah.edu/eli/). Please let me know if there is any additional support you would like to discuss for this.