

BIOLOGY 2420: HUMAN PHYSIOLOGY (4 credit hours)
School of Biological Sciences

SYLLABUS for FALL 2019

Instructors: Neil Vickers Email: n.vickers@utah.edu Phone: 801-586-1930
Office location: ASB 360/362
Franz Goller Email: f.goller@utah.edu Phone: 801-585-1929
Office location: ASB 380

Prerequisites: C- or better in BIOL 1210 OR BIOL 1610 OR AP Biology score of 4 or better AND CHEM 1110 OR CHEM 1130 OR CHEM 1210 OR CHEM 1211 OR AP Chemistry score of 4 or better.

Course Description: This lecture course provides an introduction to physiological principles and mechanisms in humans. The main physiological systems will be discussed and major emphasis will be given to the integrated nature of these systems. The interrelated physiological systems demonstrate the evolutionary mechanisms underlying a complex organism such as a human and provide challenges for health professionals.

Class Schedule: Lecture Monday – Thursday 10:45 – 11:35AM JTB310

Student Hours: We are available to meet with you after lecture for brief questions. We will also be happy to arrange to meet with you by appointment. The best way to reach us is through UMail (listed above) or in person after class. We do not check emails via Canvas as frequently.

Teaching Assistants:

Jeremy Klingler: Email: u0995025@utah.edu Office hours: TBA
Kirsten Meredith Email: k.meredith@utah.edu Office hours: TBA

Learning Outcomes – these are the specific skills and competencies that we will be working towards this semester. Hopefully, they will be useful to you in your daily life and careers.

- Learn and understand physiological mechanisms and principles
- Gain an appreciation for the complexity and individuality of integrated systems
- Develop critical thinking about research data, hypotheses and theories
- Learn to observe your own physiology and relate it to physical principles
- Learn to express and logically present scientific ideas and information
- Gain an understanding of how physiology informs about health and disease

Teaching & Learning Methods: In addition to the presentation of material in the lectures, we use a variety of teaching methods in this class, including homework thought questions, questions presented in class, in class discussions and updates on recent scientific developments.

Grading:

Thought questions (participation via Canvas)	100 pts
4 Exams (100 pts each)	400 pts

Note that the 4th mid-term will be given during Finals week (this exam will not be cumulative).

Grade guidelines: Everyone can do well in this class. Our goal is to help you succeed. If you attend and participate in class and hand in answers to thought questions, then you can expect to achieve a solid grade.

Course grades will be determined as a percentage of total points. In the past, cumulative scores of 90% and above earn an A/A-. B range (B+ to B-): 89% to 76%; C range (C+ to C-) 75% - 60%; 59% or less results in a D. we reserve the right to make slight adjustments to these ranges depending on the performance of the class as a whole.

Course Materials: No textbook is required for this course. We will post lecture slides on Canvas. Should you wish to read up on class material, several copies of a textbook (Silverthorn, DU *Human Physiology*) will be placed on the reserve shelf in the library.

Academic Conduct and Integrity

In order to ensure that the highest standards of academic conduct are promoted and supported at the University, students must adhere to generally accepted standards of academic honesty. Acts of academic misconduct include cheating, plagiarizing, research misconduct, misrepresenting one's work, and inappropriately collaborating. Suspected cases of academic misconduct are dealt with according to the rules found in the [Student Code, University Policy 6-400\(V\)](#)

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 instructors 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.

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 instructors 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, we will honor you by referring to you with the name and pronoun that feels best for you in class or on assignments. Please advise us of any name or pronoun changes so we 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](#)

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) or dial 9-1-1 if you feel that you or others are in immediate danger.

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. For students in crisis (sexual violence, suicide, LGBTQ resources) helpful contacts can be accessed directly through this [safeu link](#). Wellness Statement. 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](#) or by calling 801-581-7776.

Diversity / Inclusivity Statement. It is our intent that students from all diverse backgrounds and perspectives be well served by this course, that your learning needs be addressed both in and out of class, and that the diversity that you bring to this class be viewed as a resource, strength and benefit. It is our 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 us 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 us 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 the [Veterans Center website](#) for more information about what support they offer, a list of ongoing events and links to outside resources: Please also let us 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](#); [International Student & Scholar Services](#); the [English Language Institute](#). Please let me know if there is any additional support you would like to discuss for this class.

Date:	Day:	Lecture Topic:	Instructor:
8/19	M	Introduction to course and review of basics	Goller
8/20	T	Cellular Physiology	Goller
8/21	W	Energy in biological systems	Goller
8/22	H	Metabolism	Goller
8/26	M	Respiration 1	Goller
8/27	T	Respiration 2	Goller
8/28	W	Respiration 3	Goller
8/29	H	Circulation 1	Goller
9/2	M	Labor Day Holiday	
9/3	T	Circulation 2	Goller
9/4	W	Circulation 3	Goller
9/5	H	Digestion 1	Goller
9/9	M	Digestion 2	Goller
9/10	T	Digestion 3	Goller
9/11	W	Mid-term Exam 1	
9/12	H	Thermoregulation	Goller
9/16	M	Thermoregulation	Goller
9/17	T	Excretion – Kidney	Goller
9/18	W	Excretion – Kidney Water Balance	Goller
9/19	H	Excretion – Integrated roles of kidney	Goller
9/23	M	Metabolism and Energy Balance	Goller
9/24	T	Behavior – Movement 1	Goller
9/25	W	Behavior – Movement 2	Goller
9/26	H	Muscle 1	Goller
9/30	M	Muscle 2	Goller
10/1	T	Muscle 3	Goller
10/2	W	Integration of systems 1	Goller
10/3	H	Integration of systems 2	Goller
10/6-10/13		Fall Break	
10/14	M	<i>Review</i>	TAs
10/15	T	Mid-term Exam 2	
10/16	W	Neurophysiology 1	Vickers
10/17	H	Neurophysiology 2	Vickers
10/21	M	Neurophysiology 3	Vickers
10/22	T	Neurophysiology 4	Vickers
10/23	W	Sensory Systems 1	Vickers
10/24	H	Sensory Systems 2	Vickers
10/28	M	Sensory Systems 3	Vickers
10/29	T	Sensory Systems 4	Vickers
10/30	W	Sensory Systems 5	Vickers
10/31	H	Brain & CNS 1	Vickers
11/4	M	Brain & CNS 2	Vickers

11/5	T	Brain & CNS 3	Vickers
11/6	W	Brain & CNS 4	Vickers
11/7	H	<i>Review</i>	TAs
11/11	M	Mid-term Exam 3	
11/12	T	Endocrinology 1	Vickers
11/13	W	Endocrinology 2	Vickers
11/14	H	Endocrinology 3	Vickers
11/18	M	Endocrinology 4	Vickers
11/19	T	Reproduction 1	Vickers
11/20	W	Reproduction 2	Vickers
11/21	H	Reproduction 3	Vickers
11/25	M	Reproduction 4	Vickers
11/26	T	Immunology 1	Vickers
11/27	W	Immunology 2	Vickers
11/28 - 12/1		Thanksgiving Break	
12/2	M	Immunology 3	Vickers
12/3	T	Immunology 4	Vickers
12/4	W	Class wrap-up	Vickers
12/5	H	<i>Review</i> (last day of class)	TAs
12/9-12/13		Final Exam Period	
12/9	M	Final Exam (10:30am – 12:30pm)	