

# Biology 381: Animal Physiology Syllabus

Fall 2021

## Course Overview:

### Course Description:

Across taxa, animals face many similar physiological challenges, but have evolved a diversity of approaches to address them. In this course, we will explore what some of those challenges are, some alternative physiological solutions to them, and under what conditions certain solutions are most effective. By the end of this course, you should have a deeper understanding of animal physiology in an ecological context, be better able to comprehend and assess primary research papers, have stronger critical thinking abilities, and be better able to communicate science.

### Course Learning Objectives:

- Understand and describe mechanisms of cells, tissues, organs, and organ systems
- Explain how physiological systems are integrated and identify physiological tradeoffs
- Demonstrate proficiency in the methods and philosophy of science, including articulation and application of the Scientific Method, collection and analysis of biological data, and application of professional ethics
- Recognize critical thinking as a process of identifying, analyzing, evaluating, and constructing reasoning in deciding what conclusions to draw or actions to take
- Identify, analyze, evaluate, and construct reasoning through critical thinking processes as applied to topics in animal physiology
- Articulate the application of biological science to meeting the needs of society

**Prerequisites:** BIOL 101 or BIOL 160 or BIOL 111; CHEM 101 or CHEM 105 or CHEM 117 (or equiv). Does not count for major if BIOL 385 (or equiv) is counted.

### Times:

Lectures: M/W: 9:30 – 10:45 a.m. in CCC 213

Labs: Section 1 Th: 9:00 – 11:50 a.m. in TNR 253 or ALB 107 (see Canvas)

Section 2 F: 9:00 – 11:50 a.m. in TNR 253 or ALB 107 (see Canvas)

Section 3 Th: 2:00 – 4:50 p.m. in TNR 253 or ALB 107 (see Canvas)

Everyone will be assigned a lab group of students that will work together throughout the semester. For most lab periods, half of the students will work in TNR 253 on a wetlab and half the students will work in ALB 107 on a drylab. All students will complete all labs, but the order will vary.

### Instructor:

Sarah Jane Alger (pronounced “Al-ger”), she/her/hers

Office: TNR 439

Office hours: You can schedule a one-on-one Zoom or in-person appointment with me through [Microsoft Bookings](#). If those options don’t work for you, email me and we’ll come up with another.

E-mail: [salger@uwsp.edu](mailto:salger@uwsp.edu) (I generally respond to emails within 24 hours. If you don’t hear back from me within 24 hours, contact me again)

**Texts:** Animal Physiology, 4<sup>th</sup> Edition by Hill, Wise, and Anderson (2016) is available for rent in the bookstore.

**Other readings:** We will read and discuss several papers over the course of the semester. These are **required** reading and will be posted in *Canvas*. All lab materials will also be posted in *Canvas*.

**Key Dates:** Physiology Fundamentals Tests Due = **Wed Sept 22**  
Exam 1 = **Mon Oct 4** (will include material presented prior to 1<sup>st</sup> exam)  
Exam 2 = **Mon Nov 8** (will include material presented between 1<sup>st</sup> and 2<sup>nd</sup> exams)  
Exam 3 = **Mon Dec 6** (will include material presented between 2<sup>nd</sup> and 3<sup>rd</sup> exams)  
Final Exam = **Tues Dec 14, 2:45-4:45** (will include *everything*)

**Point Distribution:**

Physiology Fundamentals Tests	25 points
Lab Assignments	175 points
Lecture Assignments	50 points
Practice Exams	150 points
Unit Exam 1	100 points
Unit Exam 2	100 points
Unit Exam 3	100 points
Final Exam	100 points

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**Total** **800 points**

**Letter Grades:**

	87-89.9% = B+	77-79.9% = C+	67-69.9% = D+
93-100% = A	83-86.9% = B	73-76.9% = C	60-66.9% = D
90-92.9% = A-	80-82.9% = B-	70-72.9% = C-	0-59.9% = F

**Absence Policy and Accommodations:**

As we are getting used to these days, this may be another unusual and unpredictable semester. It will challenge us, both with the regular challenges of college course material and workloads, and with additional challenges related to COVID-19 and the resulting economy. Whatever your specific circumstances and challenges this semester, I will do my best to work with you and help you achieve your goals, but I need you to communicate with me to help me do that. Everything associated with this course will be posted in *Canvas* and will have due-dates with times. These due-dates are designed to help you complete your coursework by the time grades are due with some level of balance with the rest of your courses and life. **I will hold you to these deadlines, unless you ask for an extension before the deadline occurs.**

I am required to take attendance this semester, but attendance will not be included in the course grades. For all of my lectures, I will post companion recorded lectures on *Canvas* (recorded last year). These are not meant to be a substitute for in-person lecture, but rather a learning aid. If you cannot attend an in-person lecture, I encourage you to get notes from a friend that was at the in-person lecture in addition to watching and taking notes from the corresponding recorded

lecture(s). If you cannot attend an in-person lab, we will make arrangements for what assignments you can do to make up the points.

In compliance with the Americans with Disabilities Act, I will make every effort to honor requests for reasonable accommodations made by individuals with disabilities. If you have a disability and require accommodations, please register with the Disability and Assistive Technology Center (6<sup>th</sup> floor Learning Resource Center in Albertson Hall, call 715-346-3365 or email [datctr@uwsp.edu](mailto:datctr@uwsp.edu)) and *let me know as soon as possible*. Requests for accommodation can be responded to most effectively if I receive the requests early in the semester. Such requests are confidential. For more information about UWSP's policies with respect to the Americans with Disabilities Act (ADA), check here:

<https://www.uwsp.edu/hr/Pages/Affirmative%20Action/ADA.aspx>. You can also find more information on services provided at: <http://www4.uwsp.edu/special/disability/>

## Health Policies in the Time of COVID-19:

As with all UWSP courses this semester, please follow this guidance:

- At all UW-Stevens Point campus locations, **the wearing of face coverings is mandatory in all buildings, including classrooms, laboratories, studios, and other instructional spaces**. Any student with a condition that impacts their use of a face covering should contact the Disability and Assistive Technology Center (<https://www.uwsp.edu/datc/Pages/default.aspx>) to discuss accommodations in classes. Please note that unless everyone is wearing a face covering, in-person classes cannot take place. This is university policy and not up to the discretion of individual instructors. Failure to adhere to this requirement could result in formal withdrawal from the course.
- If you can get vaccinated against COVID-19, I strongly encourage you to do so in order to protect yourself, your loved ones, your classmates, and your community.
- **If you are not vaccinated against COVID-19, you are required to monitor and report your own health each day using [this screening tool](#).**
- **If you are not feeling well or if you are unvaccinated and believe you have been exposed to COVID-19, do not come to class**; email your instructor and contact Student Health Service (715-346-4646).
  - As with any type of absence, students are expected to communicate their need to be absent and complete the course requirements as outlined in the syllabus.
- Maintain physical distance from others whenever possible.
- Do not congregate in groups before or after class; stagger your arrival and departure from the classroom, lab, or meeting room.
- Wash your hands or use appropriate hand sanitizer regularly and avoid touching your face.
- Please maintain these same healthy practices outside the classroom.

## Student Recording and Sharing Class Lecture:

Lecture materials and recordings for BIOL 381: Animal Physiology are protected intellectual property at UW-Stevens Point. Students in this course may use the materials and recordings for their personal use related to participation in this class. Students may also take notes solely for their personal use. If a lecture is not already recorded, you are not authorized to record my lectures without my permission unless you are considered by the university to be a qualified

student with a disability requiring accommodation [Regent Policy Document 4-1]. **Students may copy or share lecture materials and recordings only with students in their class the same semester in which they take it.** Students may *not* copy or share lecture materials and recordings outside of the class, including with BIO 381 students from a different semester or posting on internet sites or selling to commercial entities. Students are also prohibited from providing or selling their personal notes to anyone else or being paid for taking notes by any person or commercial firm without the instructor's express written permission. Unauthorized use of these copyrighted lecture materials and recordings constitutes copyright infringement and may be addressed under the university's policies, UWS Chapters 14 and 17, governing student academic and non-academic misconduct.

## UWSP Community Bill of Rights and Responsibilities:

UWSP values a safe, honest, respectful and inviting learning environment. A set of expectations for students and instructors, known as the *Rights and Responsibilities* document, is intended to help establish a positive living and learning environment. For more information go to <https://www.uwsp.edu/acadaff/HLCSelfStudy/Community%20Rights%20and%20Responsibilities%202011.pdf>

Academic integrity is central to the mission of higher education in general and UWSP in particular. Academic dishonesty (cheating, plagiarism, etc.) is taken very seriously and will likely result in a failure (zero) for the assignment. For more information, see the UWSP "Student Academic Standards and Disciplinary Procedures" section of the *Rights and Responsibilities document*, Chapter 14, at the following site:

<https://www.uwsp.edu/acadaff/HLCSelfStudy/Community%20Rights%20and%20Responsibilities%202011.pdf>

## Title IX:

Under several federal and state laws and according to several university guidelines, I am required to report acts of a criminal or offensive nature. This includes acts of sexual harassment and assault, bias and hate crimes, illicit drug use, and acts of violence. Any disclosure or description of these incidents – both current and in the past – may be reported to the Dean of Students office (<http://www.uwsp.edu/dos/>) or the local authorities.

## Emergency Preparedness:

In the event of a medical emergency, call 911 or use the nearest red emergency phone. Offer assistance if you are trained and willing to do so. Guide emergency responders to the victim.

In the event of a tornado warning, proceed to the lowest level interior room without window exposure or any of the hallways. Avoid wide-span rooms and buildings. For floor plans showing severe weather shelters, see <http://www.uwsp.edu/rmgt/Pages/em/procedures/other/floor-plans.aspx>.

In the event of a fire alarm, evacuate the building in a calm manner. Meet in the nearest parking lot. Notify me or emergency command personnel of any missing individuals.

In the event of an active shooter, your first priority should be to run and escape. Once you are safely out of range, call 911. If you are not confident that you can get out safely, then lock doors, turn off lights, spread out, hide, and remain quiet (turn your phone ringer and vibration off). Look around for potential weapons in case you will need to fight. If an active shooter enters the room and is aware of your presence and/or the presence of others, fight with everything you've got. Follow the instructions of emergency responders when they arrive.

For details on all emergency response plans at UW-Stevens Point, please view the Emergency Management Plan at [www.uwsp.edu/rmgt](http://www.uwsp.edu/rmgt).