

Biology 381: Animal Physiology Syllabus

Spring 2019

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 to both academic and public audiences.

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; 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: 12:30 – 1:45 p.m. in CBB 135
Labs: Section 2 F: 9:00 – 11:50 a.m. in TNR 253
Section 3 Th: 2:00 – 4:50 p.m. in TNR 253
Final Exam: Th May 16 8:00 – 10:00 a.m. in CBB 135

Instructor: Sarah Jane Alger, Ph.D.
Office: TNR 439
Office hours: Thursdays 9:00 -10:00 a.m. or by appointment
E-mail: 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)
Phone: 346-2018

Texts:

- Animal Physiology, 4th Edition by Hill, Wise, and Anderson (2016) is available for rent in the bookstore.
- Biology 381 Animal Physiology Lab Manual by Alger (Dec 2019) is available for purchase in the book store.

Other readings: We will read and discuss several papers over the course of the semester. These are **required** reading and will be posted at Desire2Learn.

Clickers: This class uses “Turning Point Cloud” to do interactive polling. You will need to purchase a Turning Technologies code from the bookstore to participate in the class. You will be able to use your own device (a laptop, tablet, or smartphone) to respond to polling. If you prefer, you may check out a clicker from the UWSP IT Service Desk in room 027 ALB, basement of the UWSP Library free of charge. You will need your UWSP Student ID to get a clicker. If you rent a clicker, it must be returned to IT Service Desk before the end of finals. Students with unreturned clickers will be billed a late fee and/or may be billed the replacement cost of the clicker. For Service Desk hours:

<http://www.uwsp.edu/infotech/Pages/HelpDesk/default.aspx>

Turning Point Account: You will need to create or connect your Turning Point account through the Course in *Canvas*. Click on the Turning Point account activation link in the course in *Canvas* to get started.

You are responsible for bringing your clicker to every lecture and making sure it works. Many lectures will incorporate clicker questions that will be worth points towards your grade. You can only receive full credit if you answer with your registered account. You can find help with Turning Point Cloud here:

<https://www.turningtechnologies.com/support/turningpoint-cloud>

Key Dates: Physiology Fundamentals Tests Due = **Feb 4**
Exam 1 = **Feb 18** (will include material presented prior to 1st exam)
Exam 2 = **Mar 13** (will include material presented between 1st and 2nd exams)
Exam 3 = **Apr 15** (will include material presented between 2nd and 3rd exams)
Exam 4 = **May 6** (will include material presented between 3rd and 4th exams)
Final Exam = **May 16 (8:00-10:00 in CBB 135)** (will include *everything*)

Point Distribution:

Physiology Fundamentals Tests	5 X 5 points = 25 points
Critical Thinking Assignments	2 X 5 = 10 points
Prelab Assignments	9 X 5 points each = 45 points
Lab Assignments	9 X 10 points each = 90 points
Group Research Proposal	50 points
Group Research Paper	50 points
Pop-Science Paper	20 points
Pop-Science Public Reading	10 points
Lecture Participation	100 points
Unit Exam 1	100 points
Unit Exam 2	100 points
Unit Exam 3	100 points
Unit Exam 4	100 points
Final Exam	100 points

Lowest Exam Grade Dropped

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:

Please arrive to lectures and labs on time and turn your cellphone off.

Attendance at all lectures is required. I will not make a habit of taking attendance, but we will have several in-class activities, many of which will be worth points towards your grade. If you miss a lecture or a portion of a lecture (for which you do not have prior approval to miss), you forfeit any associated points. However, if something comes up in which you will miss a lecture *and you get approval from the instructor prior to that lecture*, you may complete an additional alternative assignment on the topic of that lecture in place of the missing in-class activity.

Everything covered in lecture is fair game on exams. If you miss a lecture or a part of a lecture, I strongly advise you to make arrangements with another student for notes and to review what was covered. I will post most lecture slides on D2L prior to class, but they only serve as an aid for taking notes, not a replacement.

There will be no make-up exams*. In place of make-up exams, I will drop your lowest exam score (including all Unit Exams and the Final Exam) before I calculate your final grade for the course. Thus, if something comes up (you get sick, have a family emergency, have a school-sanctioned event, get abducted by aliens, etc.) and you miss an exam, that will simply become your dropped score. If you do not miss any exams, your lowest test score (including all Unit Exams and the Final Exam) will be dropped. (*Exceptions can be made in extraordinary cases *that affect multiple exams*: If you think your case qualifies as extraordinary, please let me know *in advance* and I will try to be accommodating and fair. I will keep requests confidential.)

Attendance at all labs is required. Labs are participatory in nature and supplies are divided among sections; as a result, **there are no make-up labs.** However, if something comes up in which you will miss one of the first 9 labs** *and you get approval from the instructor prior to that lab*, you may turn in your Prelab Assignment and write an additional pop-science article on the topic of that lab in place of the missing Lab Assignment. If you do not get prior approval, you forfeit those points. If you arrive to lab late or leave lab early without prior approval, you forfeit your lab points in proportion to the amount of time missed. (**Absences for labs in which we are working on group projects will be handled differently, to be explained later in class).

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 (6th floor Learning Resource Center in Albertson Hall) 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/Americans-with-Disabilities-Act.aspx>. You can also find more information on services provided at: <http://www4.uwsp.edu/special/disability/>

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.