

BIOL 4000/6000: Animal Physiology * Spring 2022 Syllabus

*If significant changes need to be made to this syllabus due to COVID, I will hand-out a modified syllabus

Lecture (BC 1023): MWF 8:00-8:50a.m.

Instructor: Dr. Theresa J. Grove

Office: BC 1036

Office hours: Monday 9:00-11:00, Thursday 9:00-10:00 and 1:30-2:30, and by appointment

Phone: 333-5336 or 333-5699

Email: tjgrove@valdosta.edu (do not email me on Blazeview)

Prerequisites: BIOL1107/1107L and BIOL1108/1108L, BIOL3200 and BIOL3250 or permission of Instructor.

Textbook: Animal Physiology: An Environmental Perspective. Butler et al. (9780199655458) Available as paperback or ebook.

Goals: In this course you will gain a better understanding of fundamental processes of all living organisms and how animals have adapted to the environments in which they are found. We will use a comparative approach to examine physiological systems at different levels of biological organization including organismal, organ system, organ, tissue, cellular and molecular levels. You will also gain experience reading and interpreting scientific literature in diverse areas of animal physiology.

Attendance: Attendance is expected by all students.

Office Hours: Office hours will be held in person in the atrium by the bison. I am happy to schedule virtual office hours by appointment.

Moving Online: If I test positive for COVID, I will hold lectures online in Microsoft Teams as long as I feel healthy enough to lecture from home. Office hours will also be held online until I am out of isolation. I will post these announcements in BV and send an email to students.

Conduct: Please try to arrive on time to lecture (embrace the 8 a.m. start time!). Please don't talk when I am lecturing; if you don't understand something or didn't hear something ask. Questions are always encouraged. Unless it's an emergency do not get up in the middle of lecture, leave, and come back. During exams you cannot leave the exam and re-enter the exam room. If a student leaves (except extreme emergencies), their exam will be graded as is; the student will not be allowed to finish the exam. In the case of an extreme emergency, the student will be given a makeup exam with a different format.

Access to Slides/Information: I will make every attempt to have slides posted in BlazeView by 5:00p.m. the day before the lecture. These slides will not have all the information on them; it is the student's responsibility to come to class and take notes. Students are responsible for getting the notes from other students if they miss a lecture. I will record lectures, but if there are technical difficulties students will have to get notes from other students. All handouts and homework will be posted in BV.

Assessments for BIOL4000/6000: Grades will be based on the following:

Exams (5 at 100 points each)	500 points
Homework	~50 points
Final Exam	100 points
Review Paper (BIOL6000 only)	100 points

Grade Scale:

- A 90-100%
- B 80-89%
- C 70-79%
- D 60-69%
- F < 60

'Regular' Exams and Final Exam: All exams will be worth 100 points. Questions may cover any content from lectures during that unit/part of the semester. Five 'regular' exams will be given (see lecture schedule). Exams 1-4 will consist of a variety of types of questions that may include (but aren't limited to) matching, multiple choice, multiple-multiple choice, labeling, fill in the blank, and short answer. 'Regular' exam 5 and the final exam will be given on the day of the final (May 4) 8:00-10:00am and will be multiple choice. The final exam will cover content from 'regular' exams 1-4. If you miss an exam, you must contact me within 24 hours; makeup exams may have a different format or have different questions. No early exams will be given. No exam grades are dropped.

Homework: Homework will include various small assignments that involve students answering questions on scientific papers they read or content from lecture. Late assignments with no medical or university excuse will **NOT** be graded, and students will earn a zero for that assignment. Emailed assignments are not accepted. If you have an excused absence, any missed work must be turned in within 7 days upon your return to school; for example, if I receive a notice from Student Affairs that you will be absent February 1-5, then that means you can return on the 6th so you have until the 12th to submit missed homework. Exceptions to this must be discussed and approved by me. I will post all homework and scientific papers in BV.

Review Paper (BIOL6000): Graduate students will be required to write a 6-page review paper on a topic in physiology. This will be due April 15. More details will be provided later in January.

Academic Conduct: Cheating and plagiarism may result in a failing grade for the assignment, exam, or your final grade. The Department of Biology has a plagiarism policy on its website (<https://www.valdosta.edu/biology/resources.php>); it is your responsibility to make sure you understand this policy. If you have any questions about assignments or exams, ask before the due date.

Privacy Act (FERPA): The Family Educational Rights and Privacy Act (FERPA) prohibits the public posting of grades by social security number or in any manner personally identifiable to the individual student. No grades can be given over the telephone, but I do post grades in Blazeview.

Access Statement: Students with disabilities who are experiencing barriers in this course may contact the Access Office for assistance in determining and implementing reasonable accommodations. The Access Office is located in Farbar Hall. The phone numbers are 229-245-2498 (V), 229-375-5871 (VP) and 229-219-1348 (TTY). For more information, please visit VSU's Access Office or email: access@valdosta.edu.

Title IX Statement: Valdosta State University (VSU) is committed to creating diverse and inclusive work and learning environments free from discrimination and harassment. VSU is dedicated to creating an environment where all campus community members feel valued, respected, and included. Valdosta State University prohibits discrimination on the basis of race, color, ethnicity, national origin, sex (including sexual harassment and sexual violence), sexual orientation, gender identity, religion, age, disability, genetic information, or veteran status, in the University's programs and activities as required by applicable laws and regulations such as Title IX. The individual designated with responsibility for coordination of compliance efforts and receipt of inquiries concerning nondiscrimination policies is the University's Interim Title IX Coordinator: Ms. Selenseia Holmes, titleix@valdosta.edu, Student Union, Suite 3106, Valdosta State University, Valdosta, GA 31698, 229-333-5941. To file a report (not make an inquiry): https://cm.maxient.com/reportingform.php?ValdostaStateUniv&layout_id=7.

Concealed Guns on Campus: If you choose to carry a concealed weapon you are responsible for knowing and following the law. Licensed individuals may carry a handgun if it is mostly covered, does not actively draw the attention of people and is "not prominently, openly and intentionally displayed". While concealed guns are allowed in lecture and lab classrooms, no guns are allowed in faculty, staff and administrative offices and in rooms where high school students are enrolled (as well as other locations). It is the responsibility of you (the gun-carrier) to determine if there are high school students in the class by checking Banner or contacting the VSU's registrar to determine. It is a misdemeanor to violate this law. If

you have any questions concerning this new law, contact University Police (229-333-7861) or the University Attorney (229-333-5351; West Hall 125).

COVID Policy: Masks and vaccinations (including booster) are encouraged for all students. If you are not vaccinated you are encouraged to make an appointment to get vaccinated (and boosted) at the Student Health Center (it's free). Students can also get tested for COVID at the Student Health Center, and you should if you have any symptoms or according to the timing below.

With respect to testing, isolation, quarantine, and mask wearing:

- If you have symptoms you should go to the Student Health Center to get tested. Omicron is more contagious, and even though it seems to cause less serious disease, when it is transmitted from person to person, it is possible that it will mutate to a new variant with more severe effects.
- For positive tests, you must self-report in the portal and isolate for 5 days. If you tell me that you are positive, then I will ask you to self-report; if you do not self-report then you will not have an excused absence. After you have isolated for 5 days AND if symptoms are improving AND you have not had a fever for 24 hours (with no fever-reducing medications), you can leave isolation after 5 days, but you should continue to wear a well-fitting mask for an additional 5 days.
- If you are exposed and are: unvaccinated OR vaccinated longer than 6 months ago (Moderna and Pfizer) and not boosted OR vaccinated longer than two months (J&J) and not boosted you should quarantine for 5 days, and then wear a mask for 5 more days. If possible get tested at day 5, and if symptoms develop isolate.
- If you are exposed and are vaccinated and boosted, OR you have received the primary series of shots (Moderna or Pfizer) within 6 months (or the J&J vaccine within 2 months), you do not need to quarantine. In all of these cases, you should wear a mask for 10 days, and if symptoms appear you need to isolate (unless a COVID test says you are negative). You should get tested on day 5.
- You are expected to use the COVID Self-Reporting page on my VSU.

When I receive a notice from Student Affairs that says you will be out through a certain amount of days, you are not allowed into the class until that time period is over, unless you go back to Student Affairs, and I receive an amended notification from them. You are responsible for reading and understanding all VSU policy including those around absences. For a brief overview on student absences, please read:

<https://www.valdosta.edu/academics/academic-affairs/guidance-on-student-absences.php>

Tentative Lecture Schedule

This schedule including exam dates may be adjusted as the semester progresses

The course is divided into 5 parts:

Part 1: Animals & their Environment
Part 2: Water and Salts
Part 3: Temperature
Part 4: Oxygen
Part 5: Coordination & Integration

January	
10-21	Course Introduction; Chapter 1: Diversity and Animal Interactions with Their Environment
12	Chapter 2: Energy Metabolism
14	Chapter 2 (cont'd)
17	MLK Day
19	Chapter 3: Cells & Organisms and Their Interactions with their Environment
21	Chapter 3 (cont'd) and Review
24	Brief Review and Chapter 4: Body Fluid Regulation
26	Exam 1: Animals & Their Environment
28	Chapter 5: Osmotic & Ionic Regulation in Aquatic Animals
31	Chapter 5 (cont'd)
February	
2	Chapter 6: Water Balance of Land Animals
4	Chapter 6 (cont'd)
7	Chapter 7: Kidneys & Excretion
9	Chapter 7 (cont'd) and Review
11	Exam 2: Water and Salts
14	Chapter 8: Temperature & the Principles of Heat Exchange
16	Chapter 8 (cont'd)
18	Chapter 9: Temperature Regulation in Ectotherms
21	Chapter 9 (cont'd)
23	Chapter 10: Temperature Regulation in Endotherms
28	Chapter 10 (cont'd)
March	
2	Brief Review and Chapter 11: The Respiratory Gases, Gas Exchange & Transport
4	Exam 3: Temperature
7	Chapter 12: Respiratory Systems
9	Chapter 12 (cont'd)
11	Chapter 13: Transport in Respiratory Systems and acid-base Balance
14-18	Spring Break
21	Chapter 13 (cont'd)
23	Chapter 14: Cardiovascular Systems
25	Chapter 14 (cont'd)
28	Chapter 15: Environmental & Behavioral Influences on the Cardiorespiratory System
30	Chapter 15 (cont'd) and Review
April	
1	Exam 4
4	Chapter 16: Neurons, Nerves & Nervous Systems
6	Chapter 16 (cont'd)
8	Chapter 17: How Animals Sense Their Environments
11	Chapter 17 (cont'd)
13	Chapter 18: Muscles & Animal Movement
15	Chapter 18 (cont'd)
18	Chapter 19: Hormones
20	Chapter 20: Reproduction
22	Chapter 20 (cont'd)
25	Chapter 21: Control of Sodium, Water, and Calcium Balance
27	Chapter 22: Integration of the Respiratory and Circulatory Systems
29	Catchup and Review
May	
2	Review for Exam 5 and Final (Last Day of Class)
4	Exam 5 and Final Exam 8:00-10:00am