BIOL 4000/6000: Animal Physiology
Spring 2023 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 2:30-3:30, and by appointment (these times may be adjusted based on feedback from students)
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 throughout the semester. During the first week of class (January 9-13) I will take attendance for financial aid (attendance verification) purposes; if you do not come to at least one lecture the first week, you will be dropped from the class and will have to re-enroll if you want to continue in the class. If you are unable to attend the first week of class due to extenuating circumstances, please contact me.

Moving Online: If I test positive for COVID (or another illness) and am unable to teach in-person, I will either hold lectures online in Microsoft Teams or will post recorded lectures. Office hours will also be held online until I am able to come to work. I will post these announcements in BV and send an email to students.

Illness: If you are sick (with COVID, the flu, anything with airborne transmission), don't come to class.

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.

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. 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
Optional 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 3) 8:00-10:00am and will be multiple choice. The final exam will cover content from 'regular' exams 1-4.

Except for university-related excuses, which must be discussed with me ahead of time, all makeup exams will consist of short-answer and essay questions. All make-up exams must be completed within a week (5 business days) of the original exam date, unless approved by Dr. Grove. If an exam is not completed within the 5 business days, then at the end of the semester the average of the 5 other exams will replace the missed exam; for a second (or more) missed exam(s) when the makeup exam is not completed within 5 business days, the student will earn a zero (0) for this(these) exams. It is the student's responsibility to contact Dr. Grove about missed exams.

No early exams will be given. No exam grades are dropped. During exams students 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.

Homework: ***All homework is optional (and therefore extra credit).*** Homework will include various small assignments that involve students answering questions on scientific papers they read or content from lecture. No late assignments will be accepted. Emailed assignments are not accepted; exceptions to this homework policy must be discussed and approved by me ahead of the due date. I will post all homework and scientific papers in BV.

Review Paper (BIOL6000): Graduate students are required to write a 6-page review paper on a topic in physiology. This will be due April 14. 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 the University Center. 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.

Advice from Animal Physiology (BIOL4000) Students

At the end of Spring 2022 Animal Physiology students were asked: *What advice about this course would you give to another student who is enrolling in this class in the future?*

Below are the complete responses from the students who responded:

- Understanding the aspect given to you in the pictures help give a better understanding of the information in the slide
- Focus and always go to class because you miss one day it's like you miss a year worth of stuff.
- This class is very easy as long as you keep up throughout the semester.
- Make sure to stay on top of the material. If you miss a lecture, ALWAYS go and watch the recording so that you do not miss anything and fall behind.
- Take the information and think about how you could apply it to the real world. Thinking about it critically will help you process and understand the material better.
- go to class
- Go to class if you can don't depend on recorded lectures
- Take full advantage of office hours and any opportunity to ask questions whenever possible. Both of these activities helped tremendously in learning topics that were complicated in any way.
- Study hard and go to class.
- To study everyday for hours due to the amount of information and the level of difficulty.
- write down everything she says when taking notes, not just reading the powerpoint. learn to read graphs.
- Don't just look at the slides to study for tests, use what she said in class and her explanations to help you understand what you're looking at
- there is a lot of test if you have important classes like pre req I would take at a different time
- I would tell the student to try and relate the topics to something that way they are not in information overload.
- Fully comprehending the information given for the test is a necessity
- Come to class, or if you don't come to class, at least watch the lectures. The slides explain a lot, but her explanations are needed to actually understand the content.
- It is important to attend the lectures
- Make sure to keep up with the course material and if you get behind try to catch up as soon as you can so you can ask questions if needed.
- Study every day even if you do not feel up to it. It easy to fall behind, so stay ahead and it will make your life easier in the long run
- I would advise the student to attend class and take notes on the charts and graphs.
- It can be a lot but as long as you go to class and pay attention you'll be fine

Tentative Lecture Schedule

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

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