

BIOL 3450/5450

Credit Hours 3-3-4

ANIMAL/VERTEBRATE PHYSIOLOGY

Department of Biology

Instructor: Dr. Timothy J. Fort
Phone: (229) 249-2643
Office Hours: Tuesday 2.00 – 4.00 pm or by appointment

Office: BC 1100
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Lecture: Tuesday and Thursday 11.00 am – 12.15 pm BC 1025
Laboratory A: Wednesday 10.00 am – 12.50 pm BC 2070
Laboratory B: Wednesday 2.00 pm – 4.50 pm BC 2070

Textbook: Animal Physiology: R. W. Hill, G. A. Wyse and M. Anderson: 2nd Edition. 2008.

Course Description 3450: A study of animal physiology with an emphasis on mammalian organ systems. The molecular and cellular aspects of physiology as they relate to these systems are considered.

Prerequisites: BIOL1107, 1108, 3200, CHEM 1211/L & 1212/L, or permission of instructor.

Course Description 5450: Study of general physiological processes of vertebrates; emphasis at organ and organ system levels.

Prerequisites: Admission into the graduate program or permission of Instructor.

Course Objectives: By the end of this course, students will be expected to:

- (1) *Collect and analyze physiological data, and present the results and conclusions in written format.*
- (2) *Demonstrate an understanding of the cellular basis of physiology.*
- (3) *Relate the functioning of individual organ systems to the physiology of whole organisms.*
- (4) *Demonstrate competency in factual content and interpretation of the major concept areas of animal physiology.*

These objectives support the Department of Biology Educational Outcomes #'s 1, 3, 4 and the Valdosta State University General Educational Outcomes #'s 3, 4, 5, 7.

Attendance: Attendance of lectures is expected of all students, but is not required. Attendance of laboratory classes is mandatory. Any student missing 2 scheduled laboratory classes, without an acceptable documented reason (determined by the instructor) will receive a failing grade for the course. Student attendance of classes will be recorded.

Conduct: Students are expected to arrive on time and behave with respect in both lectures and laboratories. Students should not talk during lectures, but if you do not understand or do not hear something please ask for clarification. Use of cell phones during lectures and laboratories is not permitted. Cell phones must be turned off during lectures and laboratories. If your cell phone activates during a lecture you will be asked to leave. If your cell phone activates during lab you will be asked to leave and it will count as an unexcused absence. If your cell phone activates during an exam you will be asked to leave and receive 0% for that exam.

Cheating / Plagiarism: Please refer to the Student Code of Ethics in the Valdosta State University Student Handbook. Any student caught cheating will be penalized, ranging from receiving a zero for that assignment or test, to failure and expulsion from the course. Please refer to the Valdosta State University, Department of Biology Plagiarism Policy. By taking this course, you agree that all required course work may be subject to submission for textual similarity review to SafeAssign, a tool within BlazeVIEW.

(<http://www.valdosta.edu/academic/SafeAssignforStudents.shtml>)

Students with Documented Disabilities: Students requesting classroom accommodations or modifications due to a documented disability must contact the Access Office for Students with Disabilities located in the Farber Hall. The phone numbers are 245-2498 (V/VP) and 219-1348 (TTY).

Privacy Act: Due to the Buckley Amendment, or Privacy Act, an individual's personal information cannot be released to anyone but that individual. As such, grades will not be discussed over the phone, by email, or released to a friend or relative.

Assessment:

Lecture: 3 Exams (100 points each)	: 300	points
Cumulative Final	: 200	points
Paper **	: 100	points
Laboratory Assignments	: 100	points
Lab Notebook	: 40	points
Lab Report **	: 60	points

**** Additional requirements expected of BIOL 5450 students for the paper and laboratory report will be explained when the assignments are set.**

- Laboratory Assignments will be set during lab periods and you will generally have 1 week to complete the assignment.
- Any assigned work submitted late will **NOT** be graded.
- Any assigned work submitted electronically will **NOT** be graded, unless prior permission for electronic submission is granted.
- Make up examinations will only be given if an acceptable documented reason (determined by the instructor) is provided.
- Requirements for the Paper, Notebook, Assignments and Report will be explained during the semester.
- Lecture Exams: Question styles will vary depending on the topics being examined and may include (but are not limited to), multiple choice, fill in the blank, diagrams, short answer and essays.

Tentative Lab Schedule

Date	Topic
8/17	No Lab
8/24	Introduction to PowerLab and Data Analysis
8/31	Reflexes and Reaction Times
9/7	Earthworm Action potentials
9/14	Frog Sciatic Nerve
9/21	Sensory Physiology
9/28	Electromyograph and Muscle
10/5	Frog Skeletal Muscle
10/12	Earthworm Smooth Muscle
10/19	Respiratory Airflow and Volumes
10/26	Electrocardiogram and heart sounds / peripheral circulation
11/2	Blood Pressure
11/9	Dive Reflex
11/16	Frog Heart
11/23	THANKSGIVING – NO LAB
11/30	Galvanic Skin Response and Polygraphs

Tentative Lecture Schedule

Date	Topic	Chapter
8/16	Introduction / Homeostasis / Cells	1,2
8/18	Enzymes and Metabolism	2,7
8/23	Aerobic / Anaerobic Metabolism	7
8/25	Aerobic / Anaerobic Metabolism & Neurons	7/11
8/30	Neurons	11
9/1	Synapses	12
9/6	Sensory Processes	13
9/8	EXAM #1	
9/13	Nervous System Organization	14
9/15	Muscle LAB NOTEBOOK 9/16 by 3.00pm	19/20
9/20	Muscle / Control of Movement	20/18
9/22	Control of Movement	18
9/27	Endocrine / Neuroendocrine	15
9/29	Endocrine/ Neuroendocrine	15
10/4	Circulation	24
10/6	EXAM #2 MID TERM	
10/11	Circulation	24/25
10/13	Circulation	24/25
10/18	Oxygen and Carbon Dioxide Physiology	21/22
10/20	External Respiration PAPER 10/21 by 3.00pm	22/23
10/25	FALL BREAK	
10/27	Gas Transport LAB NOTEBOOK 10/28 by 3.00pm	23
11/1	Nutrition, Feeding and Digestion	5
11/3	Nutrition, Feeding and Digestion	5/6
11/8	Nutrition, Feeding and Digestion	5/6
11/10	EXAM #3 Lab Report 11/14 by 5.00pm	
11/15	Water and Salt Physiology	26/27
11/17	Water and Salt Physiology / Kidneys and Excretion	27/28
11/22	Kidneys and Excretion	28
11/24	THANKSGIVING	
11/29	Reproduction	16
12/1	Reproduction LAB NOTEBOOK 12/2 by 3.00pm	16
12/9	Final Exam 10.15-12.15	