

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: Monday 2.00pm – 4.00pm or by appointment

Office: BC 1100
Email: tjfort@valdosta.edu

Lecture: Tuesday and Thursday 11.00 am – 12.15 pm BC 1024
Laboratory: Section A – Tuesday 2.00 – 4.50 pm BC 2070
Section B – Thursday 1.00 – 3.50 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: BIOL 2230, BIOL 2270, and CHEM 1212, 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 the 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 an exam you will be asked to leave and receive 0% for that exam.

Assessment:	Lecture: 3 Exams (100 points each)	: 300	points
	Cumulative Final	: 200	points
	Paper *	: 100	points
	Laboratory: Assignments/Homework	: 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.*

- Assignments/Homework will be set during lab periods.
- You will generally have 1 week to complete the assignment.
- Any assigned work submitted late will **NOT** be graded.

- 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.

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. All students will be required to sign the plagiarism policy and return it to the instructor at the beginning of the semester.

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 room 1115 Nevins 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.

Tentative Lecture Schedule

Date	Topic	Chapter
8/18	Introduction / Homeostasis / Cells	1,2
8/20	Enzymes and Metabolism	2,7
8/25	Aerobic / Anaerobic Metabolism	7
8/27	No Class (Library search)	
9/1	Neurons	11
9/3	Synapses	12
9/8	Sensory Processes	13
9/10	Nervous System Organization	14
9/15	EXAM #1	
9/17	Muscle Lab Notebook 9/18 by 3.00pm	19/20
9/22	Muscle / Control of Movement	20/18
9/24	Control of Movement	18
9/29	Endocrine / Neuroendocrine	15
10/1	Endocrine/ Neuroendocrine	15
10/6	Circulation	24
10/8	Circulation	24/25
10/13	EXAM #2	
10/15	Circulation	24/25
10/20	No Class (Fall Break)	
10/27	Oxygen and Carbon Dioxide Physiology	21/22
10/29	External Respiration Lab Notebook 10/30 by 3.00pm	22/23
11/3	Gas Transport / Nutrition, Feeding and Digestion Research Paper 11/3 by 5.00pm	23, 5
11/5	Nutrition, Feeding and Digestion	5/6
11/10	Nutrition, Feeding and Digestion	5/6
11/12	EXAM #3	
11/17	Water and Salt Physiology	26/27
11/19	Water and Salt Physiology / Kidneys and Excretion	27/28
11/24	Kidneys and Excretion Lab Report 11/24 by 3.00pm	28
12/1	Reproduction	16
12/3	Reproduction Lab Notebook 12/7 by 5.00pm	16
12/11	Final Exam: 10.15am-12.15pm	

Tentative Laboratory Schedule

Week Beginning	Topic
17 th August	Introduction
24 th August	(NO LAB MEETING) Data Analysis & Library Assignment
31 st August	Reaction Times and Reflexes
7 th September	Nerve Conduction
14 th September	Frog Sciatic Nerve
21 st September	EMG and EOG
28 th September	Frog Sciatic Nerve – Gastrocnemius Muscle
5 th October	Pulmonary Function
12 th October	ECG (part 1)
19 th October	NO LABS – FALL BREAK
26 th October	ECG (part 2) and Pulse
2 nd November	Blood Pressure
9 th November	Dive Reflex
16 th November	Frog Heart (pharmacology)
23 th November	Digestion
30 th November	Electrogastrogram