

**PHYSIOLOGY ABIO 242 (4 credit hours)
SUMMER II 2005**

INSTRUCTOR: Dr. Buck Pridgen (Contact through Ms. Cutsinger, Dept Administrative Assistant, Room 201)

LECTURE ROOM: Science Bldg Room 327

LABORATORY: Science Bldg Room 108

TEXTBOOK: *Human Physiology*, Silverthorn, 3d Ed

LAB MANUAL: *PhysioEx 6*, Zao/Stabler,

COURSE DESCRIPTION: This is an introductory course to human physiology. Current concepts and teaching of cellular biology will be emphasized as the commonality of biochemical events which provide the foundation of function for the varied body systems.

COURSE OBJECTIVES:

- 1) To provide the student with an understanding of basic biochemical operations in the functional output of cells and systems.
- 2) To survey the functions of individual organs and systems.
- 3) To acquaint the student with the integration of systems function as the manifestation of ultimate body homeostasis.
- 4) To expose the student to the constructs of scientific inquiry through laboratory experimentation with primary hands-on and simulation activities.
- 5) To provide a brief introduction to abnormal function/pathophysiology/disease of selected organs/systems.
- 6) To challenge the student to appreciate "the wonder of it all"!

EVALUATION:	Five Lecture Tests @15% each	75%
	Lab Final	15%
	Clinical Writeups 2@5% each	10%

ADDITIONAL COMMENTS:

- 1) You will be expected to have read the assigned material prior to lecture.
- 2) You will be expected to have read applicable lab manual exercises.
- 3) You must bring the laboratory manual to lab.
- 4) You will be expected to endorse the following **HONOR PLEDGE** on every quiz/exam:
On my honor as a University of South Carolina at Aiken student, I have neither given nor received any unauthorized aid on the assignment/examination. To the best of my knowledge, I am not in violation of academic honesty.
- 5) No makeup exams will be given for the laboratory portion of the quizzes. No makeup exams will be given for the lecture portion except under some extreme situations (see Student Handbook).
- 6) You are encouraged to make appointments with me **if you are having problems understanding the expectations and content of this course.**
- 7) If you have a physical, psychological, and/or learning disability that might affect your performance in this class, please contact the Office of Disability Services, 126A B&E, (803) 641-3609, as soon as possible. The Disability Services Office will determine appropriate accommodations based on medical documentation.
- 8) **We will be using the machine graded Scantron sheets for Lecture tests this semester!!!!!! Please insure that you have both the answer sheet and a #2 lead pencil on the day of the quiz!!!!!!**
- 9) **This is a difficult course. I strongly advise each and every one to utilize your time judiciously and to prioritize your outside time in order to stay current on the assignments!!!!**

ABIO 242 Physiology - Summer II 2005

Jun 30	Thurs	Housekeeping Introductory Topics Membranes & (Molecular) Movements Simple Diffusion LAB: Simple Diffusion	Chap 1: Esp. pp. 6-11;Chap 2: 31-42; Chap 3:52-53 Chap 5: 125-140 PhysioEx 1 Chap 17
Jul 5	Tues	Respiratory Gas Laws, O ₂ & CO ₂ diffusion/transport Pulmonary Volumes & Mechanics LAB: Pulmonary Mechanics	PhysioEx 7 Chap 18
Jul 6	Wed	<i>More Hb and O₂ Transport</i> <i>CO₂ Transport (and THE H⁺ ion)</i>	
Jul 7	Thurs	<i>Control of Respiration</i> Clinical Problems	
Jul 11	Mon	TEST #1 Muscles: Striated&Smooth&Cardiac LAB: Skeletal Muscle Physiology	Chap 12 PhysioEx 2
Jul 12	Tues	Heart: Electrical Pump LAB: Heart Muscle	Chap 14 PhysioEx 6
Jul 13	Wed	Cardiovascular: Pipes and Pressures LAB: CardioVascular Dynamics	Chap 15 PhysioEx 5
Jul 14	Thurs	Exercise Physiology CLINICAL LAB: <i>Exercise/Conditioning</i>	Chap 23
Jul 18	Mon	TEST #2 Membranes & (Molecular) Movements Mediated Transport:Facilitated/Active LAB: Facilitated & Active Diffusion/Transport	Chap 5 PhysioEx 1
Jul 19	Tues	Kidney: More water and processing and pressures LAB: Renal-Vascular/Filtration CLINICAL LAB: Diet	Chap 18 PhysioEx 9
Jul 20	Wed	Kidney Cont'd:Acid-Base Balance LAB: Acid-Base CLINICAL LAB: Diet	Chap 18, 19 PhysioEx 10
Jul 21	Thurs	Clinical Problems	
Jul 25	Mon	TEST #3 Communication: Signals Junctions, transmitters, hormones	Chap 6
Jul 26	Tues	Endocrine, Metabolism & Growth LAB: Endocrine	Chap 7, 20, 21 PhysioEx 4
Jul 27	Wed	Conducting Membranes Neurons LAB: Nerve Impulses	Chap 5 Chap 8 PhysioEx 3
Jul 28	Thurs	CNS, ANS	Chap 9, 10, 11
Aug 1	Mon	TEST #4 GI LAB: Digestion	PhysioEx 8
Aug 2	Tues	Blood & Immune Reproductive Review	Chap 16, 22 Chap 24, Appendix B
Aug 3/4		TEST #5; LAB TEST	

Suggestions:

1. It will be very very helpful to attend regularly. Although I do not take attendance, your absence is your loss, not mine.
2. You should/must read ahead.
3. I would recommend the following guide for “study”:
 - a. Read the new chapter in its entirety. I did NOT state LEARN the new chapter!!! Read for familiarity and flow of material/concepts.
 - b. Come to class.
 - c. LISTEN to me, and look at (take in) the visual overheads.
 - d. I DO NOT recommend “taking notes”, the material is already in the text!!!!
 - e. If you must write something, just do “topic” hints.
 - f. I do recommend following along in the text to highlight the material that I cover.
 - g. If I cover it, it is important. In fact, 99% of the material I talk about, even the lame jokes and anecdotes, will be important to you in studying.
 - h. After the class, and hopefully within 6 hrs, now jot down from your recollections of class what you wish (or can).
 - g. When you are ready to do dedicated study time, read for retention the material and illustrations in the text, focusing on the pertinent and/or relative sentences/paragraphs, plus the immediately precedent and antecedent ones for continuity of the author’s thought.
 - h. Make detailed notes, outlines, etc of the material/topic as you understand it.
 - i. THE CHAPTER SUMMARY IS GENERALLY THE MORE IMPORTANT ASPECT OF THE TEXT UPON WHICH YOU SHOULD FOCUS (MEMORIZE)!!!!!!!
 - j. Lab time will be the time for your questions etc.
4. I am assuming that you are college level students. This is a difficult course and this is NOT high school!
5. I will challenge you, the material will challenge you. You must work!!!
6. Use that wonderful computer located within your head, between your ears. THINK --- ANALYZE --- QUESTION. Make connections. Acquire knowledge.
7. Do not be put off by ambiguity and unanswerable questions (at least by me or this introductory course).
8. I may seem to be intimidating---- this is not intentional; but let’s face it, I am here to guide you AND to push you. LEARN TO LEARN ON YOUR OWN. It’s YOUR life, not mine

9. I do regret that this is such a large class for lecture. But we can't help that now. Please keep the low level conversational comments to either absent or a very low growl! If you cannot hear me satisfactorily, there is usually a surplus of seats down front.

Perhaps the most valuable result of all education is the ability to make yourself to do the thing you have to do when it ought to be done whether you like it or not. It is the first lesson that ought to be learned and however early a person's training begins, it is probably the last lesson a person learns thoroughly. Thomas Huxley, British biologist