

## ZOOL 2230, PHYSIOLOGY FOR NURSING FALL 2014

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Instructor:	Mark A. Grobner	Office Hours:	MW 10-11, T 9-10, or by appointment
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### COURSE INFORMATION

#### University Course Catalog Description

(Formerly Physiology) Principles of functional physiology of organ systems with special reference to human physiology. For students desiring to enter the nursing program.

#### Course Prerequisites/Requirements

BIOL 1010/1020 or BIOL 1050. Grade of C or better in ZOOL 2250, Human Anatomy for Nursing.

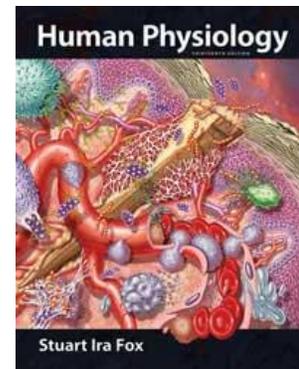
#### Required Texts and Materials

Human Physiology 13/E, Ira Fox

Biopac Student Laboratory Guide, Biopac Systems Inc. Manual (available in Blackboard)

Online access to ConnectPlus Anatomy and Physiology. Go to

<http://connect.mheducation.com/class/m-grobner-14-fall-zool-2230-4>



This course will examine human physiology. Physiology is the science of functional mechanisms of living organisms and their parts (cells, tissues, organs and systems). Human physiology therefore involves the study of the functions of the human body. In this course you will learn about the workings of your own body. Some of you are taking this course because it is required for your professional or pre-professional degrees. Others are taking it as a general education requirement. Regardless of the academic or practical reasons, I am convinced that you will find the study of physiology both fun and intellectually rewarding.

In this course you will learn about your body and how it functions. Lecture materials emphasize physiology at the cellular and organ system level including digestion, respiration, circulation, excretion, muscle and movement. At the end of the course you will be able to understand the relationships between anatomical structures and their functions, and how they are correlated and integrated into a smooth functioning organism. Furthermore, you will be able to understand how the human body adjusts to the adversities of its environment, using various modifications of the anatomical and physiological specializations.

## **Course objectives**

The students will:

1. Describe the topics studied in physiology and explain the importance of physiology in modern medicine.
2. Examine the role of the scientific method in the study of physiology as it relates to evaluating evidences and drawing logical conclusions.
3. Examine fundamental physiological principles, and the progression of structural levels of organization, and evaluate them as they apply to the homeostasis of human systems.
4. Investigate the chemical basis of life with emphasis on structure and function of macromolecules.
5. Describe the mechanisms of dehydration synthesis and hydrolysis reactions and their significance.
6. Examine the tissue level of organization and interpret the role of tissues in human systems.
7. Compare and contrast the location, organization and function of the four basic classifications of human tissues.
8. Define homeostasis and explain how this concept is used in physiology and medicine.
9. Describe the nature of negative and positive feedback loops and explain how these mechanisms act to maintain homeostasis.
10. Distinguish between intrinsic and extrinsic regulation and the roles of nervous and endocrine systems.
11. Examine and describe the major features and functions of the cardiovascular, respiratory, muscular, digestive, immune, reproductive, and renal systems and their contributions to homeostasis.

Please be sure to turn pagers and cell phones off before lecture begins. During exams, you will not be allowed to have either out, the only thing you should have is a sharp #2 pencil and your Scantron. During lecture, please refrain from socializing with your friends. This makes it hard for me to concentrate and is disrespectful to the students around you.

## **COURSE ASSIGNMENTS AND GRADING**

### **Academic Dishonesty and Misconduct**

Exams, reports, and presentations are indicators of individual performance. Copying off another student's exam, plagiarized reports, presentations or papers constitutes cheating. There is zero tolerance for cheating. Cheating in any capacity in this class will result in penalties ranging from a minimum of a zero on the assignment or exam to a maximum of expulsion from California State University, Stanislaus as indicated by the official University Policy regarding dishonesty and misconduct.

### **Class attendance is highly recommended**

Missing classes may result in poor performance in the course. You are responsible for any information or assignments you missed in your absence. You will also miss on iclicker points for questions given during

lecture; there is no making up missed iclicker points. I highly recommend reading the assigned chapters before coming to class.

### **Grading**

This course will consist of chapter quizzes to be completed with each chapter at the publisher web site, (50 points), iClicker responses (50 points) and four exams, worth 100 points each.

### **Exams**

There will be four exams during the term, worth 100 points each. Exams may consist of any of the following: multiple choice, definitions, and fill in the blank, matching, and short answer essay questions. The multiple choice portion of the exam will be made available online for you to take during a period starting 48 hours prior to the written portion of the exam. You will take this multiple choice exam online through the publisher Connect web site. During the 48 hour period you will have one hour to complete the exam. Once you start the online exam, you have to complete the entire exam, so be sure you have one hour of uninterrupted time when you log in and start. On the day of the exam, you will only have the written portion of the exam to take.

### **There will be no make-up exams**

Failure to appear at exam time without 24 hours prior notice to the instructor with an appropriate excuse, or an appropriately documented emergency, will result in zero points for that exam.

### **iClicker questions**

Each lecture, you will be asked to respond to a number of questions using the iClicker student response system. The questions will come from lecture material that was covered previously, so it is in your best interest to keep up with the material. You will receive one point for answering the questions asked each day and an additional point for each correct answer. Your final iclicker grade will be based on the percentage of points you have earned out of the total possible. You will then be awarded points out of a total of 100 corresponding to your percentage points earned. Anyone caught using two iClickers during a lecture will receive an F in the course along with the person who belongs to the second iClicker.

### **Connect.com**

For each chapter, there is a set of review questions on the web site <http://connect.mheducation.com/class/m-grobner-14-fall-zool-2230-4>. You are to complete these LearnSmart exercises by the listed due dates for each chapter. You can complete these anytime up to the due date, I will not allow you to complete assignments that are not done on time. Your final grade will be based on the percentage of points you have earned out of the total possible. You will then be awarded points out of a total of 50 corresponding to your percentage points earned.

### **Course Grading**

Your grades will be assigned as follows:

Assessment	Total Points
Exams	400
iClicker responses	50
MasteringAandP	50
Total	500

I will use plus/minus grading.

Grading Scale (%)	
94-100	A
90-93	A-
87-89	B+
84-86	B
80-83	B-
77-79	C+
74-76	C
70-73	C-
67-69	D+
64-66	D
60-63	D-
0 - 59	F

### Grades of "Incomplete"

*From The University Catalog –*

An Incomplete signifies (1) that a portion of required coursework has not been completed and evaluated in the prescribed time period due to unforeseen but fully justified reasons beyond the student's control, and (2) that there is still a possibility of earning credit. It is the responsibility of the student to bring pertinent information to the attention of the instructor and to determine from the instructor the remaining course requirements which must be satisfied to remove the Incomplete. The conditions for removal of the Incomplete shall be put in writing by the instructor and given to the student, with a copy placed on file with the department chair. A final grade will be assigned when the work agreed upon has been completed and evaluated.

Any Incomplete must be made up within the time limit set by the instructor; in any case, no more than one calendar year following the end of the term in which the Incomplete was assigned. An Incomplete should never be used to (1) give a failing student an opportunity to redo unsatisfactory work or complete additional work; or (2) give a student more time to complete his/her work when the reasons for the delay have been within his/her control. This limitation prevails whether or not the student maintains continuous enrollment. Failure to complete the assigned work will result in an incomplete reverting to a grade of NC for grading options 1 and 2, and to a grade of IC for grading option 3. (See the Academic Standards section of this catalog and the Schedule of Classes Informational Guide for grading options.)

In cases of prolonged illness or any emergency which necessitates an extension of time to complete the course, the student may petition through the academic department where the course was offered. Students may not be permitted to graduate until all Incompletes are removed or evaluated as "IC" grades. Students are not to reregister in courses in which they have an Incomplete.

[http://catalog.csustan.edu/content.php?catoid=12&navoid=541&returnto=search#indi\\_stud\\_cour](http://catalog.csustan.edu/content.php?catoid=12&navoid=541&returnto=search#indi_stud_cour)

## **COURSE POLICIES: TECHNOLOGY AND MEDIA**

### **Email**

Questions regarding course materials should be directed to me at [mgrobner@csustan.edu](mailto:mgrobner@csustan.edu). Please be sure to put ZOO 2230 in the subject line as I get a lot of emails everyday and I want to be sure to respond to yours quickly. For issues with BlackBoard, please contact the helpdesk, linked from the BlackBoard login page.

### **Cell Phones**

Cell phones should not be out or used during class. Any cell phones out during lecture or laboratory will be confiscated and returned at the end of the period. If your cell phone is out during an exam, this will result in an automatic F for the test.

### **University Academic Conduct Policy**

There will be zero-tolerance for plagiarism/cheating. Plagiarism and/or cheating will result in a 0.0 for the class. For further information, please see the CSU Stanislaus catalog for Student Code of Conduct [http://catalog.csustan.edu/content.php?catoid=3&navoid=115#stud\\_cond](http://catalog.csustan.edu/content.php?catoid=3&navoid=115#stud_cond)

## **RESOURCES**

### **Disability Resource Services**

CSU Stanislaus respects all forms of diversity. By university commitment and by law, students with disabilities are entitled to participate in academic activities and to be tested in a manner that accurately assesses their knowledge and skills. They also may qualify for reasonable accommodations that ensure equal access to lectures, labs, films, and other class-related activities. Please see the instructor if you need accommodations for a registered disability. Students can contact the Disability Resource Services office for additional information. The Disability Resource Services website can be accessed at

<http://www.csustan.edu/DRS/>

Phone: (209) 667-3159

### **Recording Policy:**

Audio or video recording of classes (tape and digital format) or use of cameras/phones to photograph or record lectures is not permitted. An exception is made for students registered with Disability Resource Services, who are approved for this accommodation. In such exceptions, DRS students will be asked to sign a "Recording Agreement" which disallows them from sharing recordings with other individuals unless approved by the DRS program.

## COURSE SCHEDULE

### Tentative Lecture Schedule

Materials will be active online with due dates, please check Blackboard and Mastering Anatomy and Physiology periodically to make sure you don't miss any assignments.

DATE	TOPIC	CHAPTER	PAGES
Aug 22, 25	Introduction to Physiology and Control Systems	1	1-23
Aug 27, 29	Chemical Compositions of the Body	2	24-48
Sep 1, 3	Plasma Membrane	3	50-57
Sep 3, 5, 8	Enzymes and Energy	4	88-97
Sep 8, 10, 12	Cell Respiration and Metabolism	5	106-128
<b>Sep 12</b>	<b>EXAM 1</b>		
Sep 15, 17	Interactions between Cells	6	130-160
Sep 19, 22, 24	The Nervous System: Neurons and Synapses	7	162-203
Sep 26, 29	The Central Nervous System	8	206-241
Oct 1, 3	The Autonomic Nervous System	9	243-264
Oct 6, 7	Sensory Physiology	10	266-314
<b>Oct 8</b>	<b>EXAM 2</b>		
Oct 13, 15	Endocrine Glands	11	316-356
Oct 17, 20, 22	The Muscular System	12	359-402
Oct 24, 27, 29	Blood, Heart and Circulation	13	404-447
Oct 29, 31	Cardiac Output and Blood Flow and Blood Pressure	14	450-490
Nov 3, 5	The Immune System	15	493-530
<b>Nov 7</b>	<b>Exam 3</b>		
Nov 10, 12	The Respiratory System	16	532-578
Nov 14, 17	The Urinary System	17	581-616
Nov 19, 21	The Digestive System	18	619-658
Nov 24, 26, Dec 1	Nutrition, Metabolism, and Body Temperature	19	660-698
Dec 3, 5, 8	Reproductive System	20	700-751
<b>Dec 15</b>	<b>Final Exam (8:30-10:30)</b>		