

**PHYSIOLOGY SYLLABUS**  
**42-702**  
**Spring 2014**

**Your first instructions for the semester are to carefully read this syllabus. Many of your questions will be answered therein.**

**Course Description:** This course has been designed to introduce the graduate student to human physiology. It targets a wide range of students with diverse backgrounds and varying biological experience. The course takes a systems approach to physiology. Due to the close interrelationship between structure and function in biological systems, each functional physiology topic will include a brief overview of anatomic structure. The physical and chemical laws that are the basis of the physiological processes will also be covered, and applications to current biomedical research and clinically relevant situations will be included.

The following is a list of units that will be addressed in order that they will be covered:

Introduction to Physiology	
Levels of Organization:	Molecular, Cellular and Tissue Physiology
Control and Regulation:	Nervous and Endocrine Systems
Support and Movement:	Muscle and Skeletal Systems
Fluids and Transport:	Circulatory, Lymphatic and Immune Systems
Environmental Exchange:	Digestive and Excretory Systems
Physiological Applications:	Reproductive System, Cancer, Tissue Engineering

In addition to the foundation material, each unit will culminate with a related case study or research topic discussion.

Sadly, it is presently beyond the scope of this class to provide in depth physical, hands-on laboratory exercises. However, example simulated exercises are available through CD and web-based venues associated with the purchase of the textbook.

**Text:** The assigned textbook for this course is Principles of Human Physiology by Cindy L. Stanfield, 4<sup>th</sup> Edition, Benjamin Cummings, San Francisco, 2011

*Note on textbook: Is it absolutely required? First, it is an excellent reference that should do you service for years to come. Second, although I do not specifically assign reading from text, generally, it serves as further explanation of the materials covered in class lectures and for homework assignments. Third, I do not specifically draw exam questions directly from the textbook, unless I very clearly denote them prior during lectures. So, to the original question, it remains your decision to buy the textbook, share a textbook, use a prior version, etc.*

**Additional Materials:** A course notebook containing representative previous semester's exams and answer keys will be placed on Blackboard. During the course, handouts and relevant research articles will be distributed to supplement the text.

The textbook is designed to augment lectures and with exception, quiz and exam questions will not be directly drawn from it. Readings from the text will be assigned prior

to covering a particular unit. Exam questions **WILL** be drawn directly from lectures, class discussions, handouts, outside readings as specifically noted including clearly defined textbook readings, and from guest speaker presentations.

**Grading:** Course performance and grading will be determined as follows:

1. Two, **in-class** exams, the second exam will be the final (30% each) ~60 %
2. Class participation ~20 %
3. Special topic thesis paper  
(Students will prepare a 20 page, double spaced thesis paper on a subject physiology related subject, mutually agreed upon with the instructor. ~20 %

Grades will be assigned by a preset grade assignment system (A=90-100%; B=80-90%; C=70-80%; D= 60-70%; R=<60%).

**Instructor Specifics:**

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Office Hours: There will be no assigned office hours at this time. Meetings will be setup as needed on mutually agreeable times.