

Biology 225: Introduction to Physiology
 T, Th 9:35-11, Math Lecture 1

Spring 2012

Instructor:

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Text:

Human Physiology:
 An Integrated Approach
 5th edition, OCC edition
 Dee Unglaub Silverthorn
 (see *final page of syllabus*)

Lecture Schedule

Date	Subject	Reading
1/31	Course intro	Ch. 1
2/2	Chemistry	Ch. 2, p. 113-123
2/7	Molecular genetics	
2/9	Molecular genetics	
2/14	Energy	Ch. 4
2/16	Oxidative metabolism	
2/21	Oxidative metabolism	
2/23	Exam I	
2/28	Cell signaling, signal transduction	Ch. 6,7
3/1	Endocrine system	
3/6	Endocrine/Nervous systems	
3/8	Nervous system	Ch. 5, 8, 9, 13
3/13	Nervous system	
3/15	Muscle function	Ch. 12
3/20	Muscle function	
3/22	Exam II	
3/27	Holiday-Campus Closed	
3/29	Holiday-Campus Closed	
4/3	Circulatory system	Ch. 14, 15, 16
4/5	Circulatory system	Ch. 25
4/10	Circulatory/Respiratory system	Ch. 17, 18, p. 35-38
4/12	Respiratory	
4/17	Digestion	Ch. 21
4/19	Digestion	
4/24	Metabolism	Ch. 22
4/26	Exam III	
5/1	Kidney function	Ch. 19,20
5/3	Kidney function	
5/8	Water balance	
5/10	Immune system	
5/15	Immune system	
5/17	Reproductive system	Ch. 26
5/22	Reproductive system	
5/24	Exam IV	

Tentative Lab Schedule

Week	Date	Subject	
1	1/30 M	Course intro, Hoag Lab Introduction	
	2/1 W	Note-taking/reading skill building	
2	2/6 M	Biological Literature, notebooks, empirical science	
	2/8 W	Osmosis, Diffusion, Surface Tension	
3	2/13 M	Osmosis Investigation	
	2/15 W	Colorimetry	
4	2/20 M	Holiday—Campus Closed	
	2/22 W	Enzyme Kinetics of Salivary Amylase	
5	2/27 M	Enzymology Investigation	
	2/29 W	Metabolism Demo/Biofeedback	
6	3/5 M	GSR and the Polygraph	
	3/7 W	Investigation	
7	3/12 M	Journal Discussion 1	
	3/14 W	EEG	
8	3/19 M	EEG Investigation	Journal Summary 1 Due
	3/21 W	Electromyogram (EMG)	
9	4/2 M	EMG Investigation	
	4/4 W	Electrocardiogram (ECG)	
10	4/9 M	ECG Investigation	
	4/11 W	Blood Pressure, HR, Cardiac Cycle	
11	4/16 M	Investigation	
	4/18 W	Respiratory volumes and movements	
12	4/23 M	Investigation	
	4/25 W	The diving response	
13	4/30 M	Journal Discussion 2	Journal Summary 2 Due
	5/2 W	Blood	
14	5/7 M	Journal Discussion 3	
	5/9 W	Urinalysis	
15	5/14 M	Present self-design labs	
	5/16 W	Present self-design labs	Lab Report Due
16	5/22 M	Exercise Physiology	
	5/23 W	Wrap-up	

Instructor and course information:

My office hours are as follows:

Monday 1:30-2:30pm

Tuesday 8:30-9:30am

Wednesday 1:30-2:30pm

Thursday 8:30-9:30am

I am happy to meet with you during my office hours, or by appointment. I also check my email several times a day, including weekends when I have time. Please do not ever think you are interrupting me; talking to students is my favorite thing and I am always happy to help you.

The last day to drop and apply for a refund is September 9; **YOU ARE RESPONSIBLE FOR YOUR OWN PAPERWORK!!** I will not drop you if you stop coming to class, and will give you a failing grade if you do not withdraw yourself from the course.

Absences are suicide in this course. Your excuse is not relevant, and generally is none of my business. Missing class will always harm your grade. If you are absent, you are responsible for anything you miss, and that includes getting notes, handouts, etc from your classmates. After you have studied these materials, I will answer a reasonable number of questions, but please do not expect private lessons.

Prepare for lecture by reading the assigned material before the class date. By coming to class prepared you can be an active participant, however if you aren't prepared you will fall victim to the course's fast pace.

You are expected to be on time for class. It is extremely rude and disruptive to come late or leave early. I will ask you to leave if you cannot respect your classmates or me. Turn off your cell phones (NOT vibrate mode...**OFF**) during class. I do encourage an interactive learning environment, but you are expected to be quiet and respectful of whoever is speaking.

Spelling and grammar matter in all of your written work! I expect any written work you hand me to be high quality English. I grade physiological content first, but careless writing or proofreading will cost you points.

I also expect you to write your own material. Quoting passages from source materials is almost never appropriate in assignments like I will assign. The use of passages from source materials without quotation marks is plagiarism. In any written assignment in this course, the moment I encounter a passage you did not write, I will start deducting points. The longer the passage, the more points I deduct. Most incidents of plagiarism will result in disciplinary action against everyone involved. The moral of the story? Put thoughts into your own words—even if you can't write as well as the professionals, you will certainly get a better grade than if you copy passages.

Your labs will usually be done with one or more partners. I assume (and encourage) that you will share data and even spend time trying to understand the results together. However, I insist that you write alone. Do not (**DO NOT**) write the report as a group. Every phase of the lab report, from choice of concepts to outline of topics to writing the document, must be done individually. If your lab report looks like your lab partner's, you will be subject to disciplinary action for plagiarism.

Grading criteria: Accuracy, clarity, completeness, use of English, including grammar and spelling.

Lecture Exams: 4 @ 100	400
Lab Report: 1 @ 50	50
Self Design Presentation: 50	50
Lab Notebook: 2 @ 50	100
Term paper: (Due Monday, 4/30) 100	100
Journal Article Summary: 2 @ 25	50
Journal Discussion Presentation: 25	25
Online Quizzes: 10 @ 5	50
Other assignments:	<u>???</u>

Total: 825 + other assignments

Your final grade in the class will be weighted such that lecture exams will comprise 60% of your grade, with the remainder of course work making up the additional 40%.

See my handout “Additional Course Material” for more information on these assignments.

I grade on a straight scale:

90-100% = A
80-89% = B
70-79% = C
60-69% = D
50% and below = F

The grade you earn is the grade you get!

Please note:

- Keep track of all of your own points.
- Keep all of your tests and other graded work until the class is over..
- Assignments must be handed in on time to receive full credit. Late assignments will be docked 10% for each day (or fraction of day) that they are late, including weekends.
- Lecture exams may be based on lectures, tutorials, discussions and assigned textbook and paper readings.
- If you leave lecture early, you may not receive credit for any in-class assignments completed prior to your early departure.
- All exams count and there are no make-up exams without **prior** consent and only under extreme circumstances (i.e. a documented medical emergency). Make-up exams may be entirely essay and/or oral.

By the end of the semester, you should be able to:

1. Define Physiology, homeostasis and the internal environment.
2. Develop a basic understanding of physiological mechanisms.
3. Describe the physiological function (s) each of the body systems.
4. Generate a research paper with an appropriate literature cited page.
5. Apply physiological theory to “real-life”.
6. Operate basic physiological laboratory equipment.
7. Understand and apply the scientific method.
8. Evaluate empirical data.
9. Apprise the validity of physiological experimental design.
10. Interpret physiological literature.

Student Learning Outcomes:

1. Describe the field of physiology and the major physiological mechanisms that support the cells, tissues and organ systems of the human body.
2. Recognize the contribution of each organ system to the maintenance of homeostasis, and examine how interactions between the organ systems affect the function of the whole organism.
3. Demonstrate knowledge of the scientific method by designing and executing laboratory experiments, analyzing data, composing laboratory reports and defending original work in a presentation created by student teams.

Accommodations:

If you have a documented physical, psychiatric/emotional, medical, or learning disability that may impact your ability to carry out assigned course work, I urge you to contact the staff in the Office of Special Programs & Services at (714) 432-5548. The staff will review your concerns and determine, with you, what accommodations are necessary and appropriate. All information and documentation is confidential.

Academic Dishonesty:

Copying another student’s work, copying any other person’s work without citing the source, submitting any work that is not your own, any kind of notes or other outside information visible during an exam, are examples of cheating. If I catch you doing any of those or any other dishonest act, I will assign you zero points on that assignment and enforce the maximum penalty allowed under OCC’s Academic Integrity policy. The use of a cell phone or any other electronic device during an exam is specifically forbidden (calculators are OK for computations only when I give permission). During an exam, any such device exposed in your possession, or the use of any such device will be treated as cheating.

What you need to register for Mastering A&P:

- **A valid email address**
- **Student access code:** (comes in the student access kit that is packaged with your new textbook, otherwise, you can purchase access online at www.masteringaandp.com)
- **The ZIP code for your school:** 92626
- **Your student ID number**
- **A course ID:** RUSSELL225SP12

To register:

- Go to <http://www.masteringaandp.com>
- Under “Register,” click **Students**.
- To register using the Student Access Code inside the Student Access Kit, select **Yes, I have an access code**. Click **Continue**.

-OR- **Purchase access online:** Select **No, I need to purchase access online now**. Select your textbook and whether you want to include the e-text, and click Continue. Follow the on-screen instructions to purchase access online using a credit card. The purchase path includes registration but the details may differ slightly from this handout.

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- **License Agreement and Privacy Policy:** Click **I Accept** to indicate you have read and agree to the license agreement and privacy policy.
- Select the appropriate option under “Do you have a Pearson Education account?” and supply the requested information. Upon completion, the **Confirmation & Summary** page confirms your registration. This information will also be emailed to you.

Log In:

- Go to <http://www.masteringaandp.com>
- Click **Login** to MasteringA&P
- Enter your Login Name and Password and click **Log In**.

Enroll in your Instructor’s Course and/or Access the Self-Study Area:

- Upon first login, you’ll be prompted to do one of more of the following:
- **Join your MasteringA&P** course by entering the **MasteringA&P Course ID** provided by your instructor.
- Enter your student ID.
- Click **Save** and **OK**.