HPHY 212 Evidence, Inference, and Biostatistics – Fall 2014

University of Oregon, Department of Human Physiology

Instructor:			
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Office Hours: Posted on blackboard. Please check weekly, as the times may change.

Lectures: Monday and Wednesday, 2:00 pm - 3:20 pm, 101 Living-Learning Center South

Course Description: This course is designed as a critical, first look into the core philosophy and principles of learning and investigation in human physiology. The primary objectives are to help students build a practical foundation of process and content on which success in upper division courses and independent study/research can be supported, and the connection between laboratory science and the practice of medicine established. The course will emphasize practical activities that will help students think as scientists, gather/manage data, and facilitate the development of useful questions and conclusions.

Course Learning Objectives/Outcomes: Students will be able to…

1) Describe how new physiology knowledge is created
2) Describe how new knowledge is communicated to scientists and the general public
3) Perform basic statistical tests
4) Fulfill the requirements necessary to participate in human subjects research
5) Discuss the key factors necessary for navigating a Human Physiology major at the University of Oregon
6) Demonstrate the keys steps required for lab reports

Discussions: Rather than a review of the content covered in lecture, the focus of the discussion sections will be to expand on this content and perform exercises that are better suited for small groups.

Accessibility: The University of Oregon is working to create inclusive learning environments. Please notify me if there are aspects of the instruction or design of this course that result in disability related barriers to your participation. You are also encouraged to contact the Accessible Education Center (formerly Disability Services) in 164 Oregon Hall at 346-1155 or uoaec@uoregon.edu.

Iclickers: We will be using iclickers to help facilitate interaction in this large class, so please make sure you have those by the 2nd day of class. They are available at the Duckstore.

Readings: There is no assigned textbook for this class. Any readings will be announced in class and posted on blackboard.

Notes and Forums: Slides from lecture will be posted and available for download after class. There will also be a forum site available for asking questions and discussing the material. More information on how to access these features will be provided on blackboard.

Academic Misconduct: The University Student Conduct Code (available at conduct.uoregon.edu) defines academic misconduct. Students are prohibited from committing or attempting to commit any act that constitutes academic misconduct. By way of example, students should not give or receive (or attempt to give or receive) unauthorized help on assignments or examinations without express permission from the instructor. Students should properly acknowledge and document all sources of information (e.g. quotations, paraphrases, ideas) and use only the sources and resources authorized by the instructor. If there is any question about whether an act constitutes academic misconduct, it is the students' obligation to clarify the question with the instructor before committing or attempting to commit the act. Additional information about a common form of academic misconduct, plagiarism, is available at http://library.uoregon.edu/guides/plagiarism/students/index.html.

Grading Criteria

Homework (40%): Weekly assignments are to be submitted online and are due at the beginning of your discussion section the following week. There be a reduction of 20% in that assignment's grade for each day that it is late. Each assignment will be worth the same number of points and lowest grade of the quarter will be dropped. The one exception is the Full Lab Report assignment, which is due the last week of class. This assignment will be worth more and cannot be dropped.

Exams (50%): There will be two mid-term exams (15% each) and a comprehensive final exam (20%).

Clicker Participation (5%): This portion of your grade will be based on using clickers to answer multiple-choice questions during lecture. If you use your iclicker in lecture 70% of the time, you will receive full credit. After that, your participation grade will follow your usage.

Collaborative Institutional Training Initiative (5%): Go to citiprogram.org and complete the Protection of Human Research Subjects course for students (Instructions will be posted to blackboard). You will receive full credit for completing this prior to the class on ethics in week 9.

Discussion Attendance: Discussion section attendance is mandatory. If you miss one discussion, this will not affect your grade. For every additional discussion section missed, your grade for the class will be lowered by 2 percentage points.

Extra Credit: There will be an opportunity to earn extra credit by either participating in a research study on campus or interviewing a graduate student about their research. Details will be provided in class.

Final Grades: The course will be graded on the following scale

A+ (98 - 100%)	A (92 - 97.9%)	A– (90 - 91.9%)
B+ (88 - 89.9%)	B (82 - 87.9%)	B– (80 - 81.9%)
C+ (78 - 79.9%)	C (72 - 77.9%)	C– (70 - 71.9%)
	D (60 - 69.9%)	
	F (Below 60%)	

Tentative Weekly Course Outline

Week	Date	Topic	Discussion
1	M 9/29	Introduction and Scientific Method	Heart rate experiment
	W 10/01	Scientific Method	
2	M 10/06	Scientific Method	Hypothesis development
	W 10/08	Plagiarism	
3	M 10/13	Publication (peer-review articles)	Library I
	W 10/15	Publication (how to find them)	
4	M 10/20	Publication (how to organize them)	Library II
	W 10/22	Statistics (introduction)	
5	M 10/27	**Mid-Term Exam I**	Statistics I
	W 10/29	Statistics (distribution/sampling)	
6	M 11/03	Statistics (group differences)	Statistics II
	W 11/05	Statistics (correlation)	
7	M 11/10	Statistics (sensitivity/specificity)	Statistics III
	W 11/12	Statistics (power)	
8	M 11/17	Ethics in Research	Physiology Experiment I
	W 11/19	Human Physiology Labs	
9	M 11/24	**Mid-Term Exam II**	Physiology Experiment II
	W 11/26	TBD	
10	M 12/01	Human Physiology Major	Physiology of Exercise Projects
	W 12/03	Evaluation of research posters	
11	W 12/10	**Final Exam at 2:45 pm**	