

Biopsychology (PSY 304)

University of Oregon

Fall 2004

Class: T/Th 12:00 – 1:20pm – 129 McKenzie – 4 credits – CRN: 14328

Labs: Th 4:00 – 5:20pm – 189 PLC (CRN: 14329)

F 11:00 – 12:20pm – 202 Villard (CRN: 14330)

Prerequisites: none

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General Course Description: In this course, we will examine our understanding of how human behavior (e.g., cognition, emotions, learning, perception, sleep, and even reproduction) is controlled by physiology (e.g., the brain, neurons, neurotransmitters, and hormones). We will also discuss how breakdowns in the physiology can lead to various types of mental disorders, such as schizophrenia, Alzheimer's and drug addictions. *In a nutshell, this course will help you better understand how a three-pound piece of meat makes us who we are.*

We have only ten weeks to cover a broad range of material. The class will be fast-paced and will be quite a lot of work. Please keep this in mind when scheduling other classes and activities.

Required Text: *Foundations of Physiological Psychology (6th edition)* by Neil Carlson (please notify me immediately if you have difficulty obtaining the text from the bookstore). The publishers of this text also provide a companion web site (containing, among other things, questions for self-testing) at http://wps.ablongman.com/ab_carlson_fdns_6; however, note that since this site is run by the publisher, I cannot vouch for the accuracy of the material presented there.

Course Website: The official course website is on Blackboard (<http://blackboard.uoregon.edu>). Please notify the instructor if you have difficulty logging into the site. This site will provide supplemental information for the course (course outline, grades, copies of overheads, etc.).

Optional Text/Weblinks: As *optional* reading on the subject, try *Biological Psychology* by James Kalat or *Biopsychology* by John P.J. Pinel (copies can be found at Knight Library, or from instructor). You can also get more neuroscience-related information at the following web sites:

<http://www.brainconnection.com>

<http://www.neuroguide.com>

<http://faculty.washington.edu/chudler/introb.html>

<http://www.hhmi.org/senses>

http://www.drugfreeamerica.org/Drug_Resource/

<http://www.howstuffworks.com>

If you know of other web sites of interest, please pass them along to the instructor.

Course Format: The material in this course will be presented through a combination of assigned reading from the text, class lectures, and in-class videos, demonstrations and discussion. Lecture material and readings will often overlap, but will not be replications of each other; some lecture material will not be covered in the readings and vice versa. You are expected to **do the assigned reading before the corresponding lecture**. Discussions of the material during lecture will be more fruitful if you have at least a general understanding of the material beforehand, helping you to ultimately comprehend and retain the material.

Grading: Grades will be based on a number of assignments and tests as well as participation in class activities. The point breakdown will be as follows:

Reading Responses:	10% (4 responses worth 2.5% each)
Homeworks:	15% (3 homeworks worth 5% each)
Midterm exams:	40% (2 midterms worth 20% each)
Final exam:	25%
Lab & Participation:	10% (may include in-class assignments)
Total:	100%

What about extra credit? You can earn up to 3 points in extra credit in various ways (see below). These points will be added to your final grade at the end of the class. So, if you get an 80% with all of your work, and you do 3 points of extra credit, your final score will be 83%. You may:

- Earn up to 3 points of extra credit participating in the Human Subjects summer pool. You will receive 1 point of extra credit for every hour of experiment participation. In addition, you will be required to **type a half- to one-page summary** of each experiment, including a discussion of its relation to what you've learned in this course. To access the Human Subjects website to sign up for experiments, go to: <http://uopsych.sona-systems.com/>
- Earn up to 3 points of extra credit writing a 4-6 page research paper on a topic relevant to Biopsychology. If you would like to choose this option, please speak with the instructor as soon as possible.

Reading Responses (10% of final grade): The reading responses have two aims. One is to ensure that you keep up with the reading for the course; the other is to allow you the opportunity to demonstrate that you've reflected on the material. Your reading response should be about a half-page long (**typed**) and should **highlight the three most important points** covered in the reading *for the class period that it's due, or the previous class period*. For example, the first reading response should cover Chapter 2 and/or 3. In addition, I'd like you to come up with (at least) one **question** on the material. The question doesn't need to be profound, but it does need to be *specific*. For example, if the book's explanation of a certain phenomenon is confusing, your question might be "On page 208, Carlson describes the cutaneous receptors. However, I'm unclear as to how a particular receptor would actually detect a precise stimulus. How are the neurons able to discriminate a stretch of the skin from pressure on the skin?" Profound questions are of course welcomed so long as they are related to the material at hand. ☺

Homeworks (15% of final grade): The problem sets are intended to assess your knowledge of the material without the stress of an exam. These will be primarily short-answer format. You are welcome to work in groups; however, the write-up must be **typed** and in your own words.

Lab (10% of final grade): Lab scores will be determined by class participation (discussion, questions, etc.), attendance, and from lab assignment scores.

Exams (Midterm #1: 20%, Midterm #2: 20%, & Final: 25%): The midterm and final exams will be composed of multiple choice, matching, fill-in-the-blank and short answer questions. The two midterm exams (but not the final exam) will also be retaken during the lab period immediately following the exam, with the total exam grade equal to an average of the original and retaken exams; if the retaken exam has a lower score than the original, only the original will be counted. The final exam will contain questions drawn from the entire course, but with a greater focus on material covered since Midterm #2. ***No make-up exams will be given without evidence of a valid excuse, and the final cannot be taken earlier or later than the time listed in the University final exam schedule - if you know in advance that you cannot take all exams at the appointed times (see the course schedule below), do not take this course!*** If unforeseen circumstances during the term prevent you from taking an exam, notify the instructor immediately.

Academic Honesty: All work submitted in this course must be your own. For the consequences of academic dishonesty, refer to the Schedule of Classes published quarterly. Violations will be taken seriously and are noted on student disciplinary records. If you are in doubt regarding any aspect of these issues as they pertain to this course, please consult with the instructor before you complete any relevant requirements of the course. (Text adopted here as recommended from the UO web site regarding academic honesty at: <http://darkwing.uoregon.edu/~conduct/>).

Students with Disabilities: If you have a documented disability and anticipate needing accommodations in this course, please make arrangements to meet with the instructor as soon as possible. Also, please request that the Counselor for Students with Disabilities (Molly Sirois, sirois@oregon.uoregon.edu, Phone 346-1073, TTY 346-1083) send a letter verifying your disability.

Students for whom English is a Second Language: If you are a non-native English speaker and think you may have trouble in this course due of language difficulties, please see the instructor as soon as possible to make any necessary special arrangements.

Course Outline: This is only a working draft of the course outline; it will be revised as the quarter progresses. Additional readings may be added. Dates on which particular topics are to be presented in lecture are subject to change, as are reading assignment due dates; however, I will not change the dates of exams unless absolutely necessary. The official updated version of the outline will reside on the Blackboard web site. Updated print versions can also be obtained from the instructor or teaching assistant during normal office hours

<u>Week</u>	<u>Day</u>	<u>Date</u>	<u>Topic</u>	<u>Reading</u>	<u>Exam/Quiz</u>
1	T	Sept. 28	Biopsychology overview	Ch. 1	
	Th	Sept. 30	Neuronal Structure and Function	Ch. 2	
2	T	Oct. 5	Neuroanatomy	Ch. 3	Reading Resp. #1 due
	Th	Oct. 7	Psychopharmacology	Ch. 4	
3	T	Oct. 12	Neuroscience methods	Ch. 5	Homework #1 due in class
	Th	Oct. 14			
4	T	Oct. 19	First Midterm (Ch. 1-5)		Midterm #1
	Th	Oct. 21	Vision	Ch. 6	
5	T	Oct. 26			Reading Resp. #2 due
	Th	Oct. 28	Other senses (audition, touch ...)	Ch. 7	
6	T	Nov. 2	Sleep and biological rhythms	Ch. 8	Homework #2 due in class
	Th	Nov. 4	Reproductive behavior	Ch. 9	
7	T	Nov. 9			Reading Resp. #3 due
	Th	Nov. 11	Emotion	Ch. 10	
8	T	Nov. 16	Second Midterm (Ch. 6-9)		Midterm #2
	Th	Nov. 18	Learning and Memory	Ch. 12	
9	T	Nov. 23	Neurological disorders	Ch. 14	Reading Resp. #4 due
	Th	Nov. 25	NO CLASS OR LABS – THANKSGIVING HOLIDAY		
10	T	Nov. 30	Schizophrenia, affective disorders & anxiety	Ch. 15	
	Th	Dec. 2	Autism, stress and drug abuse	Ch. 16	Homework #3 due in class
Final	Thurs. 8am!	Dec. 9	Final Exam – Will concentrate on Chapters 10, 12, 14, 15 and 16, but will also be somewhat comprehensive		