

Biopsychology (PSY 304)

University of Oregon -- Summer 2019

Instructor:	Jeff Peterson	Course Dates:	June 24 - July 18
Office Hours:	Thursdays 12:00 – 2:00 Location: 232 LISB	Classroom:	117 Lokey Education (ED)
Email:	jpeters7@uoregon.edu	Time:	10:00 – 11:50 mtwr
		CRN:	42402; 4 credits
		Prerequisite:	PSY 201

COURSE DESCRIPTION

How does the brain, a mass of biological tissue, give rise to our perceptual experiences, our emotions, and our ability to interact with the environment? To understand the workings of the brain, we begin by exploring the cells (i.e. neurons) that make up the brain – their structure and function, with a focus mostly on the ways in which these neurons communicate with one another using electrical currents and chemical signals. We also discuss how the chemical interaction between neurons is affected by various drugs, so we can better understand their behavioral effects. We also study the anatomy of the brain and the way in which different functions are segregated within the tissue. We then explore many of these functions in depth, including, for example:

- Sensation (particularly vision), which allows us to discover things about the world around us.
- Learning and memory, which provides a means of storing (and later recalling) information.
- Emotions, which modulate and color our behavior and interactions with others.
- Finally, we discuss what happens when things go wrong in the brain – lesions due to trauma or stroke, developmental disorders like autism, degenerative disorders like Alzheimer's and Parkinson's Disease, schizophrenia, and depression, to name a few.

LEARNING OBJECTIVES

By the end of this course you should be able to:

- Identify neural structures and anatomical subdivisions of the nervous system, explain neural communication, and discuss how chemicals affect neural processing
- Describe how our underlying physiology influences a wide range of human behaviors
- Reflect on course topics and apply the information you learned to your own lives
- Understand (with appropriate skepticism) neuroscience-related reports in the popular press.

COURSE MATERIALS

Required	<i>The Mind's Machine</i> , 3 rd Ed., by Watson & Breedlove, Sinauer Associates, Inc.
	iClicker
Additional Materials	Course website: http://canvas.uoregon.edu
	Textbook companion website: http://3e.mindsmachine.com

The textbook and iClicker are available for purchase at the campus bookstore. Additionally, a copy of the text is on reserve at the Knight Library. Please let me know if you have any difficulty obtaining either of these items.

Course Format: The material in this course will be presented through a combination of assigned readings from the text, class lectures, and in-class videos, demonstrations, and discussion. Lecture material and readings will have some 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 complete 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.

A note about the summer course: This course covers a lot of material and does so quickly. Do not underestimate the amount of work you will need to put in each day to keep up with the material. That being said, I am happy to meet with you on an individual basis should you find you need any assistance understanding the material. If you are unable to attend office hours, please let me know so we can find an alternate time to meet.

COMPONENTS OF COURSE GRADE:

Component	% of Final Grade	Letter Grade	Grade Range
Exams	75%	A	90 – 100% of total possible points
Quizzes	15%	B	80 – 89%
iClicker Participation	10%	C	70 – 79%
		D	60 – 69%
<i>Extra Credit</i>	<i>Max. 3%</i>	F	0 – 59%

Grading: Scores in the upper and lower third of each grade range will be awarded a ‘plus’ or a ‘minus’, respectively (e.g. 80-83.33 is a ‘B-’, 83.34 – 86.66 is a ‘B’, etc.). Grades will be awarded according to departmental standards (<https://psychology.uoregon.edu/courses/departement-grading-standards/>). Typically, grades are not curved. However, I reserve the right to relax (but not stiffen) this criterion for final grade assignments, depending on the actual distribution of scores in the class.

Grading problems: If you feel there has been an error in working out your grade please let me know as soon as possible. I want you to get every point you have earned. If you are unhappy with your final grade but agree that it has been worked out correctly, please don't ask for a better grade, or extra opportunities to make a better grade, as a "favor" at the end of the semester. The answer to such unfair requests must always be "no".

Exams (1 & 2: 20% each; Final: 35%): Each exam will be composed of multiple choice, matching, fill-in-the-blank, and short answer questions. The final exam is cumulative, but will primarily focus on material presented after Exam 2. ***If you know in advance that you cannot take all exams at the appointed times, do not take this course!*** If unforeseen circumstances during the term prevent you from taking an exam, notify me immediately.

Quizzes (15%): Twelve short, multiple choice quizzes related to each topic will be administered on Canvas. Each quiz is made available at noon on the dates listed in the course schedule below and are due at 10:00 am the following day. The quizzes are open-text/open-note, but you are expected to complete them on your own. The two lowest quiz scores will be dropped, with the remaining ten quizzes yielding 15% of the final grade. No make-up quizzes will be offered. If you miss a quiz, that score will be one of the two that are dropped.

iClicker Participation (10%): Clicker questions will NOT be graded on correctness; they are solely intended for you to test your knowledge and highlight potential points of confusion that require further discussion. You will need to respond to 90% of all clicker questions to receive full credit for this component of your grade. If you have any difficulty obtaining an iClicker, please meet with me as soon as possible to discuss possible alternatives.

Extra Credit (3% max.): Up to 3% extra credit can be earned. Extra credit will be added to your *final grade in the course*. For example, completing all of the extra credit would increase a final grade of 78 up to an 81, resulting in a B- for the course instead of a C+. There are two options for earning extra credit.

Option 1: Psychology Human Subjects Pool (HSP). The HSP is designed to provide students the opportunity to see firsthand how psychology experiments are performed; at the same time, you'll be providing data that will help a researcher learn how the brain works. If you decide to participate, you will earn 1 point of extra credit for each hour you serve as a subject, up to a maximum of 3 points (credits beyond 3 will not be counted). To participate, follow the guidelines for the HSP posted at <http://psychology.uoregon.edu/research/human-subjects-pool/>. Note that it is your responsibility to faithfully follow the rules of HSP, as described in the link above.

Option 2: Students who prefer not to participate in the Psychology Human Subjects Pool can instead earn extra credit by writing a short paper on a topic within biopsychology. This may include finding a relevant popular media article or choosing a podcast episode from those posted on Canvas then writing a short summary/reflection paper (2-3 pages, double-spaced). Completing the response paper will earn 3 extra credit points. If this option is your preference, **please send me the article you found prior to writing your paper.**

Communication: The best way to reach me outside of class is via email. I will do my best to respond within 24 hours during workdays (Monday – Friday) and within 48 hours on weekends. If you prefer to meet in person to discuss an issue or to look over an exam, please see me during office hours. If you are unable to meet during my scheduled office hours, let me know and we can find a mutually convenient time to meet.

Classroom climate: It is my goal that you feel comfortable and respected – both by me and your peers – in this class. Please let me know if I or other students make you feel uncomfortable, so that appropriate corrections can be made. If you feel that you or someone else has been the victim of bias in this class, you may consider contacting the Bias Response Team (bias.uoregon.edu/index.html).

Classroom Etiquette: Students in large classes often believe they are invisible, that they will not be noticed, and that one's individual behavior does not matter. *This is not true!* You can make a difference by listening attentively, asking questions, and contributing to discussions. Just as actively engaged students have a positive influence on the classroom environment, activities like talking to your neighbor, texting, coming late, leaving early, personal grooming, reading the newspaper, loud yawns, sleeping, surfing the web, or cell phone use can be extremely disruptive. PLEASE make sure that you and your fellow students get the most from this course by abstaining from such activities. Cell phone use (for texting, calls, or web surfing) is prohibited (also, please silence your ringer before each class). Laptops can be used only for taking notes (no web surfing, checking Facebook, etc.), and they are highly discouraged even for that purpose.

Students Needing Accommodations for Accessibility: If you have a documented disability and anticipate needing accommodations in this course, please make arrangements to meet with me as soon as possible. Also, please request that a counselor at the Accessible Education Center (uoacc@uoregon.edu, tel. 541-346-1155) send a letter verifying your needed accommodations. For a list of resources provided by the Accessible Education Center, please see aec.uoregon.edu.

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 to language difficulties, please see me as soon as possible to make any necessary special arrangements. If you think you may need to use a dictionary for in-class exams, you must ask to have your dictionary checked by the instructor prior to the exam. Electronic dictionaries are not permitted.

Academic Honesty: All work submitted in this course must be your own. Violations will be taken seriously and will be noted on student disciplinary records. If you are caught cheating, you will receive a 0 on the assignment; you may also receive a failing grade for the course. 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 portion of the course. For more information, see the UO web site regarding student conduct, <http://dos.uoregon.edu/conduct>.

Course Schedule

Date	Topic*	Readings	Quizzes**
Week 1			
24-June	Intro to Brain and Behavior	Ch. 1	Quiz 1
25-June	Cells and Structures	Ch. 2	Quiz 2
26-June	Neurophysiology I	Ch. 3	Quiz 3
27-June	Neurophysiology II	Ch. 3	Quiz 4
Week 2			
1-July	Exam 1		
2-July	Chemistry of Behavior I	Ch. 4	Quiz 5
3-July	Chemistry of Behavior II	Ch. 4	Quiz 6
4-July	*** <i>Independence Day: No Lecture</i> ***		
Week 3			
8-July	Sensorimotor System	Ch. 5	Quiz 7
9-July	Vision I	Ch. 7	Quiz 8
10-July	Vision II	Ch. 7	Quiz 9
11-July	Exam 2		
Week 4			
15-July	Emotions	Ch. 11	Quiz 10
16-July	Memory and Learning	Ch. 13	Quiz 11
17-July	Psychopathology	Ch. 12	Quiz 12
18-July	Cumulative Final Exam		
20-July	<i>Extra credit due by 11:59 pm</i>		

* The topic discussed on a given day is subject to change slightly. In the case of a substantial change, an announcement will be made in class and an updated version of the schedule will be posted on Canvas.

** Quizzes are made available on Canvas at 12:00 pm (noon) on the dates listed above. Each quiz is due by 10:00 am the following day.