

BISC-230xg, **Biology of the Brain**

Spring Semester 2021

Course Description: This is a GE course (D, Life Sciences) designed for non-science majors and is not available for major credit. Topics to be considered include the structure and function of the brain of humans and other animals including the role of the brain plays in regulating a range of behaviors.

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TA: Elizabeth Loxterkamp; loxterka@usc.edu

Blackboard:

<https://blackboard.usc.edu>

Recommended Textbooks:

(MM): *The Mind's Machine* by Watson and Breedlove.

Publisher: Sinauer. ISBN: 9780878939336.

(SP): *Sensation and Perception* by Wolfe et. al.

Publisher: Sinauer ISBN: 9781605352114

Lectures: MW 12:00-1:50 PM, online

Lectures will be given via Zoom at the times indicated above. Exams will be given during these times as well (see below). A link to the Zoom meetings will be available on Blackboard before each scheduled lecture.

PowerPoint slides of the lectures will be posted to Blackboard in advance of each class meeting. The contents of these slides will be drawn from the textbook readings but will also contain information from other sources. A successful learning strategy is to read over the lecture notes before class so that class time so can be efficiently spent learning the material in greater depth.

Grading (there is no “extra credit” so please, don’t ask):

Exam 1 (Wednesday, February 10)	100 points
Exam 2 (Wednesday, March 10)	100 points
Exam 3 (Monday, April 5)	100 points
Exam 4 (Friday, May 7; 11 AM – 12 PM)	100 points
Laboratory	100 points
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Total	500 points

Lecture Exams:

There will be four in-class exams given synchronously via Blackboard (during the scheduled lecture times). During the exams you'll need to join the Zoom meeting with video and audio enabled. Exams will cover information given in lectures only; no exam questions will be taken from the readings that is not also covered in lecture. Exams will consist of a mix of multiple choice, true/false, and matching type questions. Laboratory performance will be covered separately in the labs and will be announced during the first lab meeting. The final exam is not cumulative and will only cover material since the third exam.

Pass/No Pass Policy:

Students taking this course with the Pass/No Pass option must have a final score equivalent to "C minus" or better to receive a "Pass." "No Pass" will be assigned for final scores less than the equivalent of a "C minus."

Re-Grading of Exams:

If you wish to have one or more exam questions re-graded you must submit a *written* request within one week of when your exam was returned to you. The entire exam will be re-graded, not just the part you think deserves more credit. Your score may go up or down as a result of a re-grade.

Missed Exams:

No make-up exams will be given. If you are unable to take an exam at the scheduled time you must give written notification as soon as possible, preferably in advance. If you miss an exam, assignment, quiz, etc. for a reason beyond your control (e.g. a medical issue or a University-sanctioned event) you must provide written documentation of said reason within seven days of the exam or assignment due date. Documentation must be sent to Dr. Moore. If documentation is not received within seven days the score for the missed assignment will be a zero. Upon receipt of valid documentation, the score for the missing assignment will be prorated. In other words, the score for the missed assignment will be the average of the score for the other like assignments. (For example, if exam 2 is missed, that score will become the average of exams 1, 3, and 4). Please note that prorating cannot be done for a missed exam 4.

Final Grade Determination:

Grades will be assigned on a curve, based on the total number of points earned in the course. After each exam a curve will be given by the instructors to indicate roughly what letter grade corresponds to students' current number of points. Specifically, you will be provided with the current course average and a provisional letter grade scale. Please remember that the course mean provided on Blackboard is provisional as it is based on the number of points possible at that point in the course. Only the total number of points earned by the end of the semester will determine course grades.

Lecture Schedule: Topics will be covered in the general order given below.

Lecture #	Date	Topic	Reading
1	W 1/20	Introduction to and overview of the course; evolution of the brain	MM: Chapter 1
2	M 1/25	Structure and organization of the nervous system	MM: Chapter 2 SP: Chapter 1
3	W 1/27	Cells of the nervous system	MM: Chapter 2 SP: Chapter 1
4	M 2/1	Electrical properties of neurons	MM: Chapter 3
5	W 2/3	Electrical signaling in nervous systems	MM: Chapter 3
	M 2/8	Review for exam 1	
	W 2/10	EXAM 1 (covers lectures 1-5)	
	M 2/15	Presidents Day Holiday	
6	W 2/17	Synaptic transmission	MM: Chapter 4
7	M 2/22	Synaptic integration	MM: Chapter 4
8	W 2/24	Introduction to sensory systems	
9	M 3/1	Somatosensory and motor systems	MM: Chapter 5 SP: Chapter 13
10	W 3/3	Sound and hearing	MM: Chapter 5 SP: Chapter 9,10
	M 3/8	Review for exam 2	
	W 3/10	EXAM 2 (covers lectures 6-10)	
11	M 3/15	The vestibular system	MM: Chapter 5 SP: Chapter 12
12	W 3/17	Taste and smell sensation	
13	M 3/22	The eye and retina	MM: Chapter 7 SP: Chapter 5
14	W 3/24	Visual processing	MM: Chapter 7 SP: Chapter 5
15	M 3/29	Color vision	MM: Chapter 7 SP: Chapter 5
	W 3/31	Review for exam 3	MM: Chapter 6
	M 4/5	Exam 3 (covers lectures 11-15)	MM: Chapter 6
	W 4/7	Wellness Day	
16	M 4/12	Binocular vision	SP: Chapter 8
17	W 4/14	Attention and the perception of objects	MM: Chapter 13
18	M 4/19	Learning and memory	MM: Chapter 10
19	W 4/21	Biological rhythms and sleep	MM: Chapter 10
20	M 4/26	Language	MM: Chapter 15
	W 4/28	Review for final exam	
	F 5/7 11am-12 noon	Exam 4 (covers lectures 16-20)	

Academic conduct, students with disabilities:

Any student requesting academic accommodations based on a disability is required to register with the Office of Disability Services and Programs (DSP, STU 301, 213-740-0776) each semester. You must deliver an approved DSP letter to Dr. Moore early in the semester as possible. Please see SCampus (<http://www.usc.edu/dept/publications/SCAMPUS/>) for additional policies that are not covered here (i.e. academic integrity, proper conduct, etc.) but that do still apply.