

Psychology 2210

Updated Aug 20, 2017

Please bookmark this page online at: <http://faculty.missouri.edu/segerti/2210/>

Instructor:	Dr. Ines Segert
E-mail:	SegertI@missouri.edu (Best way to reach me)
Office:	125 Psychology Building
Segert Office Hours	TBA
T.A.	
TA E-mail & Office Hours	TBA

Brain & Behavior, 4th Edition, 2015

Required Text:

Bob Garrett

Grading:

Three exams 135 points each

Total 405 points

Course Description: Neuroscience is a relatively new field which believes that the best way to understand human behavior, emotions, and thought is by understanding the workings of the brain. Neuroscience can be seen as a direct descendant of philosophy, albeit one with more precise, measurable, and falsifiable goals and techniques.

A major premise of neuroscience is that the mind and body are not separate, independent entities, but that they are interdependent. This belief is summed up in the aphorism "The mind is what the brain does." Thus, by deconstructing the nuts and bolts of brain function, we can gain information about such complex phenomena ranging from memory, consciousness, self-image, to sexual attraction, religiosity, and self-will.

This field is one where major discoveries are made almost daily and "facts" presented in a text are soon outdated. Because of the rapid pace of change, I prefer to be flexible about the schedule of topics.

Attendance and Participation: You should plan to attend every class and participate in class discussions. Note that it will be harder to get a top grade if you do not attend regularly since test material comes primarily from lectures and class discussions. If you do have to miss a lecture, make sure to get a copy of the notes from someone who is a conscientious note-taker. It is my policy not to provide missed notes. Lists of terms for each lecture, along with review for each exam, are available on the course website.

Although I don't take attendance, I do give several in-class quizzes for extra credit throughout the semester. These are given at random dates and are intended to prepare you for the exams. You must be in class in order to be get these points.

Laptop Policy: I encourage you to take notes without using your laptop. Although you may have the best intentions, laptops ultimately make it very easy to distract yourself and others. Recent studies also indicate that laptop use for note-taking, even without checking facebook, etc, results in worse performance on the exams. You may think you can multi-task, but again, evidence indicates that attempts to multi-task come with a cost in terms of attention and learning.

Recording Policy: Lectures may NOT be recorded on video or cell phones. University of Missouri System Executive Order No. 38 lays out principles regarding the sanctity of classroom discussions at the university. The policy is described fully in Section 200.015 of the Collected Rules and Regulations. Redistribution of audio or video recordings of statements or comments from the course to individuals who are not students in the course is prohibited without the express permission of the faculty member and of any students who are recorded. Students found to have violated this policy are subject to discipline in accordance with provisions of Section 200.020 of the Collected Rules and Regulations of the University of Missouri pertaining to student conduct matters.

Basic Classroom Guidelines:

- I start lectures on time. You should be prepared to start on time as well.
- Please try not to leave before the end of lecture so as not to distract others.
- Please talk when you're invited, either by raising a hand or participating in an activity. Chatting is very distracting to your fellow students and prevents them from hearing the lecture.
- Please turn off cell phones, iPods, etc. during class.

Teaching Assistant: Melissa Tapia is our Teaching Assistant. She can answer any questions you may have during his office hour. **Note that Melissa is not here to provide you with missed lecture notes.** It is your responsibility to come to class and take notes.

Text: The required text for the class is *Brain & Behavior*, 4th Edition, by Bob Garret. The book provides a very up to date introduction to the field. Do not worry if you have little or no background in the area; this course assumes none. In addition to the text, I may post journal articles on our syllabus. Most will be supplemental, but material from those designated as "required" will be on the tests.

Examinations: There will be 3 examinations given. Material will come from both the lecture (primarily) and assigned text/articles. **Exams will be made up of 45 multiple choice and T/F questions, worth 3 points each.** Exams will be held during class period on the dates specified in the class schedule below. Each exam is worth 33% of your final grade, and exams are not cumulative. **THERE IS NO FINAL DURING EXAM PERIOD!!!!**

Make-up Policy: Students who are unable to take one of the exams for approved excuses are responsible for informing the our TA or me **before** the date of the exam. **Approved excuses include the following:** (a) the exam overlaps with participation in a University sanctioned athletic or academic event, (b) the student has a serious medical condition, or (c) the student has a death in the immediate family. The following are not legitimate reasons to miss an exam: personal travel, such as vacations, weddings, or graduations; work schedules; court appearances; university events that are not sanctioned athletic or academic events, such as fraternity and sorority events, intramural sports or club activities

No makeup exams will be given without approval from Dr. Segert, and documentation is required. Approved students will take a short-Answer make-up during finals week. Please note that make-up exams are comprised of essay questions instead of all multiple-choice questions given in class exams. Although the format is different, the material covered is the same.

Grading

Letter grades are based on the total number of points earned from exams, and are determined as follows:

Letter Grade	Total Cumulative Points
A+	397-405 Pts
A	377-396 Pts
A-	365-376 Pts
B+	352-364 Pts
B	336-353 Pts
B-	324-335 Pts
C+	312-323 Pts
C	296-313 Pts
C-	284-295 Pts
D+	271-283 Pts
D	255-272 Pts
D-	243-254 Pts
F	Below 243 Pts

Rounding policy: Final Grades are determined by the points you earn in the class. It is to your advantage to study and prepare throughout the semester, so you are not in the position of missing the next higher grade by a point or two at the end of the semester.

Note: I will not respond to emails asking me to adjust or add points to your grade. Exam scores are adjusted when necessary; such adjustments are made immediately after each exam and applied to all students taking that exam. No other grade adjustments are made.

Academic Honesty

Academic integrity is fundamental to the activities and principles of a university. All members of the academic community must be confident that each person's work has been responsibly and honorably acquired, developed, and presented. Any effort to gain an advantage not given to all students is dishonest whether or not the effort is successful. The academic community regards breaches of the academic integrity rules as extremely serious matters. Sanctions for such a breach may include academic sanctions from the instructor, including failing the course for any violation, to disciplinary sanctions ranging from probation to expulsion. When in doubt about plagiarism, paraphrasing, quoting, collaboration, or any other form of cheating, consult the course instructor.

In this course, cheating, or the appearance of it, will result in an automatic zero on that exam. Such actions include, but are not limited to: displaying a test for others to see, looking at another person's test paper, attempting to communicate in any manner with another student during the test, using notes or text during the exams. In addition, any incident of suspected cheating will be reported to the provost's office.

Intellectual Property Notice

All course materials including but not limited to the syllabus, course assignments, study guides, learning guides, online lecture videos and content, and lab book (i.e. course pack) are property of the instructor and University and may not be shared online or distributed in any manner to others. Students are prohibited from posting course materials or notes online and from selling notes to or being paid for taking notes by any person or commercial firm without the express written permission of the professor teaching this course. Doing so will constitute both an academic integrity violation and a copyright violation. Violations of copyright laws could subject you to civil

penalties and criminal liability. Violations of academic integrity may subject you to disciplinary action under University policies

Accommodations For Students With Disabilities

If you anticipate barriers related to the format or requirements of this course, if you have emergency medical information to share with me, or if you need to make arrangements in case the building must be evacuated, please let me know as soon as possible.

If disability-related accommodations are necessary (for example, a note taker, extended time on exams), please register with the Office of Disability Services (<http://disabilityservices.missouri.edu>), S5 Memorial Union, 573-882-4696, and then notify me of your eligibility for reasonable accommodations. For other MU resources for students with disabilities, click on "Disability Resources" on the MU homepage.

Note-Taker Opportunity. Are you looking for something to put on your resume while doing something for your peers? Are you looking for something that will assist in your accountability in going to class and taking good notes? Become a Notetaker for the Disability Center! Visit the Disability Center's webpage and click the "Notetaker Sign-In" button to fill out the form for notetakers. You can review the [Notetaker Tutorial](#) for additional information or call 573-882-4696. At the end of the semester, you could be eligible for a token of appreciation and can indicate the work on your resume!

PLEASE NOTE: This class may not be taken for credit if you have already taken or are currently enrolled in Psych 4210 .

Class Schedule and Assignments

Date	Topic	Assignment
8/22	Overview Article: Creating a False Memory Article: Erasing a Fear Memory	None
8/24	Introduction to Brain & Behavior: Historical Background Discovering Motor Cortex Turning Memories On & Off Recommended Further Reading: Mirror Box Capgras Review Article	Chapter 1 Chapter 4, p 96-98 List of Terms
8/29-8/31	Introducing the Brain: Basic Anatomy Einstein's Brain DBS surgery: Brain Surgery Step by Step Brain Surgery video	Chapter 3: p 55-72 List of Terms Anatomy Figures
9/5-9/7	Introducing the Brain: Neurons and Glia Signaling: Resting Membrane potential	Chapter 2: p 23-26; 33-35 Chap 2: p 27-30

	Primer on Signaling	
9/12-9/14	Signaling: Action Potential; Post-synaptic Potentials Synaptic Transmission: Drug Effects	Chap 2: p 31-33 Chap 2: p 36-41
9/19	Catch up & Review <u>Study Guide Exam 1</u>	
9/21	NO CLASS- but watch assigned <u>video</u> <i>Secrets of the Mind</i> <u>Transcript</u>	<u>Link to video</u>
9/26	Exam 1	Exam is given during regular class time
9/28	Addiction	Chap 5: p 142-153 <u>List of Terms</u>
10/3	Addiction, con't Drugs & Behavior: MDMA Carhart-Harros, et al : <u>Effects of MDMA in the Brain</u>	
10/5	Methods: Measuring Electrical activity Article discussed in class: Fried: <u>Hippocampal Recording in Humans</u> <u>Neuronal Recording in Humans</u>	Chap 4: p 99-107 <u>Updated List of Terms</u> Video: <u>Using Thoughts to treat Paralysis</u>
10/10	Methods: Imaging and Experimental Techniques Nature Op-Ed: <u>Reading Minds</u> Video Clip: <u>Deep Brain Stimulation</u> Nature Op-Ed: <u>How to validate fMRI results</u>	Chap 4 p 107-111

	<p><u>Noradrenergic Modulation of Masseteric Reflex I</u></p> <p><u>Noradrenergic Modulation of Maseteric Reflex II</u></p>	
10/12	<p>Sexual Development and Orientation</p> <p><u>2016 Review Article: Sexual Orientation</u></p>	<p>Chap 7: p 207-225</p> <p><u>List of Terms</u></p>
10/17	<p>Sexual Behavior, con't</p> <p><u>Fraternal Birth Order</u></p>	
10/19	<p>Sexual Behavior, con't</p> <p><u>Finger Length & Orientation</u></p>	
10/24	<p>Catch-Up and Review</p> <p><u>Study Guide Exam 2</u></p>	
10/26	<p><u>Exam 2</u></p>	
10/31	<p>Self-Regulation, Cognitive Control, and Technology: The New Marshmallow Test</p> <p>Article: Jonides, <u>Neural Correlates of Delay of Gratification</u></p>	<p><u>List of Terms</u></p> <p>Chap 15: p 502-503</p>
11/2	<p>Multi-Media and Attention</p> <p>Required Article: Nass, <u>Cognitive Control in Multi-taskers</u></p> <p>Required Article: Poldrack, Modulation of competing memory systems by distraction</p> <p>Recommended Article: Saldai, <u>Laptops & Distraction</u></p> <p><u>PEW Internet Use Survey</u></p> <p>Colbert: <u>Head in Clouds</u></p>	<p><u>List of Terms</u></p>
11/7	<p>Multi-Media and Attention, con't</p>	
11/9	<p>Emotions: Definition, Measurement, Theories</p>	<p>Chap 8: p 231-241</p> <p><u>Kassam, et al: Identifying emotions by brain activation</u></p> <p><u>List of Terms</u></p> <p><u>List of Terms</u></p>
11/14	<p>Emotion: Anatomy</p>	<p>Chap 8: p 250-255</p>

		<u>List of Terms</u> Articles discussed in class: <u>Tranel Article: Panic in Patients with Amygdala Damage</u> <u>Sanfey Article: Insula and Disgust</u>
11/16		<u>Video: Cliff Nass Multitasking</u>
11/18-11-26	THANKSGIVING BREAK	
11/28	Consequences of Lack of Emotion: Moral Decision Making Sociopaths Aggression & Violence <u>Raine Article: Poor Fear Conditioning Predicts Adult Criminality</u> <u>Raine Article: Moral decision-making in Psychopathy</u> <u>Raine: Predatory vs. Affective Aggression</u> <u>Link to Adrian Raine Talk</u> <u>Denver Post Article: Donte Page Murder Case & Adrian Raine</u>	
11/30	Disorders <u>Psilocybin for Anxiety</u>	Chap 14: p 441-456
12/5	Catch-Up and Review <u>Study Guide Exam 3</u>	
12/7	Exam 3	
	THERE IS NO FINAL EXAM DURING EXAM PERIOD!!!!!!	
	Learning & Memory: Long Term Potentiation	

Implanting False Memory

Deleting a Memory

LTP Review article

Lie Detection

Langleben: GKT fMRI Detection

Rosenfeld: P300 "Brain fingerprinting"