

Behavioral Neuroscience - PSYC W2450

Course Syllabus Spring 2012

Instructor: Kathleen M. Taylor, Ph.D.
e-mail: kt200@columbia.edu

Office: 356 Schermerhorn Extension
Office Hours: Posted on Courseworks

Course Description: Behavioral Neuroscience explores behavior by understanding the influences of biological processes. Why do we dream? What makes us eat? Why are some drugs so addictive? How do we form memories? What are the biological bases of mental disorders? We will explore answers to questions like these by looking at the principles governing neuronal activity, the relationship between brain activity and subjective experience, the role of neurotransmitter systems in memory and motivational processes, and the presumed brain dysfunctions that give rise to psychopathologies like schizophrenia and depression.

Prerequisites: Psych W1001 or W1010 or permission of the instructor.

Text: The text for this course is *Biopsychology*, 8th edition (ISBN: 9780205832569) by John P.J. Pinel. The text is available in the Columbia Bookstore. Be sure to get the most recent edition of the text. Supplemental readings will be posted on Courseworks.

Exams and Grading: There are 4 exams for this course, 3 midterms and a final. Exams cover lecture, text and supplemental reading material, results of class demonstrations, and any material presented through additional media sources (videos, demonstrations, etc.). Lecture slides are posted on Courseworks within one week after the lecture. Study questions appear at the end of the lecture slides and should be used to prepare for exams. Tips on how to study effectively for this class are posted on Courseworks. Midterm exams will cover the material covered to date in lectures since the last exam. The final exam will be a cumulative multiple choice exam. The lowest test grade from the 4 exams will be dropped, and your course grade will be calculated from the scores on the remaining 3 exams.

Exams must be taken at the scheduled time unless you have been excused in advance of the exam for an extreme and documented emergency, such as a death in the family, an illness severe enough to require hospitalization, or a major preexisting conflict. Only Prof. Taylor can grant an excused absence from an exam. **Any unexcused absence from an exam will result in a required withdrawal from the class.** If you have an excused absence the grade of 0 for that exam that will count as your lowest exam score and you will be required to take the final exam. **There is no option to make up a missed midterm exam for any reason.** If you are satisfied with your course grade based on the 3 midterm exams, you may choose not to take the final exam; the final exam will then count as your lowest exam score. There are specific policies that will be in effect for each exam. Please read the Exam Policies file posted on Courseworks prior to the first exam.

Course grading will be according to the ranges posted in the Grading Policies file on Courseworks. Individual exams are not curved and grades are not rounded. If the final course grades are below what I would normally expect by the end of the semester I may choose to adjust the grade ranges, but I will not make this decision until the final exam is graded and the final course grades are calculated. Please note that in order to earn an A+ in this course every piece of work that contributes to the final grade must be in the A+ range. Please read the Grading Policies file posted on Courseworks.

Final Exam Scheduling: The final exam will take place at the time determined by the University Registrar. The final must be taken at the scheduled time. Please note: The projected date for our final is on Wednesday, May 9th from 9am to noon.

Behavioral Neuroscience In Depth: This semester you have an opportunity to explore the world of behavioral neuroscience in one of two ways in addition to attending class. You may either attend a seminar given by a scientist about their work, OR you may write about a recent and exciting finding in the current neuroscience literature. Detailed descriptions of these assignment options are posted in the Class Files section of Courseworks. *CHOOSE ONLY ONE OF THESE ASSIGNMENTS.*

This assignment is due by 5pm on Thursday, April 5th.

Extra Credit: There is no extra credit option for this course. If you are struggling with the material or in studying effectively please see your instructor or one of the TAs as soon as possible to get help.

Disability Services: If you require accommodation for a disability, please notify the Office for Disability Services and your instructor at least 2 weeks prior to the first exam.

Date	Topic	Text Chapter(s)
Jan 18	Course Introduction and Scientific Methods	Ch. 1
Jan 23, 25	Research Methods Genetics and Neuroanatomy	Ch. 5 Chs. 2 and 3
Jan 30, Feb 1	Neuroanatomy and Neurophysiology	Chs. 3 and 4
Feb 6, 8	Visual System	Ch. 6
Feb 13, 15	Other Sensory Systems	Ch. 7
Feb 20, 22	Exam Q&A Session Midterm #1	Chapters 1 through 7 and supplemental readings
Feb 27, 29	Motor Systems	Ch. 8
Mar 5, 7	Development Neuroplasticity	Chs. 9 and 10
Mar 12, 14	<i>Spring Break</i>	
Mar 19, 21	Learning and Memory	Ch. 11
Mar 26, 28	Hunger and Satiety Midterm #2	Ch. 12 Chapters 8 through 12 and supplemental readings
Apr 2, 4	Hormones and Sex Sleep and Dreaming	Chs. 13 and 14
Apr 9, 11	Circadian Rhythms Psychopathology	Chs. 14 and 18
Apr 16, 18	Drug Addiction	Ch. 15
Apr 23, 25	Lateralization Emotion, Stress and Health	Chs. 16 and 17
Apr 30	Midterm #3	Chapters 13 through 18 and supplemental readings

Changes to this schedule and supplemental readings will be announced in lecture.