

Behavioral Neuroscience - PSYC UN2450

Course Syllabus

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? How does the environment interact with our genes? 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 mental illnesses like schizophrenia and depression.

Prerequisites: Psych W1001 or W1010 or permission of the instructor. Basic knowledge of biology and chemistry is helpful, but not necessary.

Text: The text for this course is *Biopsychology*, 9th edition by John P.J. Pinel. The text is available in the Columbia Bookstore or as an eBook through the publisher and several book sellers. Be sure to get the **9th edition** of the text. Supplemental readings are required and will be posted on Courseworks. At least one copy of the text will be available on reserve in the Science Library in NoCo.

Study Materials: Lecture slides are posted on Courseworks within 48 hours after the lecture. Lecture slides are a supplement to the lecture and should not be considered a replacement for attending class; if you are not able to attend a lecture you should be sure to get notes from a classmate. 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. I do not do not post slides prior to the lecture because I want the slides to reflect the material discussed in the lecture, and sometimes I have to omit some prepared material to keep on schedule.

Exams: There are 4 exams for this course, 3 semester exams and a cumulative final. Semester exams cover lecture and supplemental reading material, results of class demonstrations, and any material presented through additional media sources (videos, demonstrations, etc.). Each exam will cover only the material since the previous exam. The cumulative final exam will be a multiple choice exam and will cover all the material from the class. Your lowest exam grade will be dropped.

Exams must be taken at the scheduled time unless you have been granted an excused absence by Prof. Taylor **prior** to the exam. Excused absences are only granted for extreme hardships. If you have an excused absence for a missed exam you can make up that exam on the Saturday following the original exam date at gam. This is the only time available to make up the exam.

If you are satisfied with your course grade based on your 3 semester exams, you may choose not

to take the final exam; the final exam will then count as your lowest exam score and be excluded from your course grade calculation.

Please see the Exam Policies document posted in Courseworks for a complete description of all exam policies for this course.

Chapter Quizzes: There will be an online quiz on Courseworks covering the material from each chapter in the textbook. Each quiz consists of 10 multiple choice questions randomly drawn from a question bank. Your lowest three quiz grades will be factored in as extra credit. Please see the file about the chapter quizzes on Courseworks for a description of how this will be calculated. You may take the quizzes for full credit up to 24 hours before the semester exam covering that material. After that time, you may complete the chapter quizzes for half credit until the last day of the semester (Monday, May 1 at 5pm).

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. The *projected* date for our final is on Monday, May 8th from 7:10-10pm.

Paper and Seminar: This semester you have an opportunity to explore the world of behavioral neuroscience in two ways in addition to attending class: by attending a seminar given by a scientist about their work, and by writing about a recent and exciting finding in the current neuroscience literature. Detailed descriptions of these assignments are posted in the Files and Resources section of Courseworks in the Course Information folder. Both assignments are due by 5pm on Friday, April 21st. Late assignments will only earn half credit and must be submitted by 5pm on the last day of classes (May 1st). All assignments must be submitted through the Assignments area on Courseworks. You can complete either or both assignments at any time during the semester so please plan appropriately as there are no extensions for these assignments.

Grading: The lowest test grade from the 4 exams (3 semester exams and the cumulative final) will be dropped, and your course grade will include the scores on the remaining 3 exams. Course grades are calculated as follows:

Exams = 25% each Chapter Quizzes 15% Paper and Seminar 5% each

At the end of the semester, if you are satisfied with your course grade after completing all required work, you may choose not to take the final exam; the final exam will then count as your lowest exam score. Please read the Exam Policies file posted on Courseworks prior to the first exam. The method used for determining letter grades is described in detail in the Grading Policies file posted on Courseworks.

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. There will be separate online quizzes for people with testing accommodations. You must provide a copy of the ODS letter to be given access to the extended time quizzes.

Date	Topic	Text Chapter(s)
Jan 18	Course Introduction, Scientific Methods, Research Methods	Chapter 5
Jan 23,25	Neural Conduction and Synaptic Transmission	Chs. 3 and 4
Jan 30, Feb 1	Anatomy and Genetics Sensation and Perception	Chs.2, 3, 6
Feb 6, 8	Sensation and Perception	Chs. 6, 7
Feb 13, 15	Sensation and Perception Motor Systems	Chs. 6, 7, 8
Feb 20, 22	Exam #1 Plasticity	Ch.10
Feb 27, Mar 1	Plasticity Learning	Ch. 10, 11
Mar 6, 8	Learning and Memory	Ch. 11
Mar 13, 15	<i>Spring Break</i>	
Mar 20, 22	Motivation – Feeding	Chs. 12, 13
Mar 27, 29	Motivation - Sex Exam #2	Ch. 13
Apr 3, 5	Sleep Drug Addiction	Chs. 14, 15
Apr 10, 12	Drug Addiction Lateralization and Language	Chs. 15, 16
Apr 17, 19	Emotion, Stress and Health	Ch. 17
Apr 24, 26	Psychopathology	Ch. 18
May 2	Exam #3	
Mon, May 8 7:10-10pm	<i>Projected Date of Final Exam</i>	Cumulative

***Changes to this schedule will be announced in lecture.
All exams include the material covered in lecture and supplemental readings.***