

UNIVERSITY OF NEW MEXICO SYLLABUS
PSY2250: BRAIN & BEHAVIOR
DR. RON SALAZAR

GENERAL INFORMATION

Instructor: Ron Salazar, Ph.D., Phone: 505-925-8634

E-mail: rasalaz@unm.edu Section/Term: 501/ Fall 2019 Credit Hours: 3

Meeting: Tues & Thurs 4:30-5:45 PM Room: C 103

Office Hours: Tues & Thurs 12:00-1:00pm Office: A building, faculty offices #23

Course Description:

A general survey of the biological foundations of behavior and mental processes. Students will gain an understanding of anatomy, physiology, and chemistry of the nervous system and their relationships to human behavior.

Student Learning Outcomes:

Upon completion of the course students should be able to:

1. Identify and describe basic neuroanatomical structures and functions.
2. Identify and describe chemical processes of the nervous system.
3. Apply course concepts to psychological processes, such as learning, memory, sensation, perception, drive states, sleep, and language.
4. Apply course concepts to psychological disorders, such as schizophrenia and mood and anxiety disorders.
5. Describe the techniques used to study the relationship between brain and behavior.

SPECIFIC LEARNING OUTCOMES

Upon successful completion of the course, the student will be able to ...

- 1. Demonstrate an understanding of the different structures of the brain and nervous system:**
 - a. Describe the gross anatomy of the nervous system;
 - b. Describe the microscopic anatomy of the nervous system which includes neurons and neuroglia

- 2. Demonstrate an understanding of the different functions of the nervous system:**
 - a. Describe the physiology of the nervous system which includes:
 - i. resting potentials,
 - ii. action potentials
 - iii. graded potentials

- iv. neurotransmitters
- v. synaptic transmission
- vi. IPSPs, EPSPs, PSPs, etc.

3. Demonstrate an understanding of the chemistry of the brain and nervous system :

- a. Explain how voltage gated ion channels work
- b. Discuss how different drugs effect neuronal functioning
 - i. Agonistic drugs
 - ii. Antagonistic drugs;
- c. Explain drug addiction and the brain's reward circuits

4. Develop the ability to apply 1, 2, & 3 above to different psychological processes such as: learning, memory, sensation, perception, drive states, sleep, language, etc:

- a. Discuss the different diseases of the nervous system and recovery of function from brain damage;
- b. Evaluate the different sensory systems structure and function (i.e. vision & hearing);
- c. Discuss how hormones work;
- d. Discuss sexual differentiation and biological basis of gender differences/ preferences;
- e. Explain the function of movement and the motor system
- f. Describe the regulation of drive states such as hunger, thirst, sex and regulation of body temperature;
- g. Explain the biological basis of learning and memory;
- h. Discuss the different sleep stages, functions of sleep and the circadian cycle;
- i. Discuss the biological basis of emotions and stress;
- j. Explain lateralization of language and other cortical functions that are localized;

5 Develop the ability to apply 1,2, &3 above to psychological disorders such as: bipolar disorder, unipolar disorder, anxiety, and schizophrenia:

- a. Describe the biological basis of mood disorders and schizophrenia;
- b. Describe biological basis of anxiety disorders;
- c. Describe other disorders of brain dysfunction (e.g. Alzheimer's, Autism, Epilepsy, Multiple Sclerosis, Parkinson's Disease, Huntington's Chorea, etc.).

Attendance and Grading Policy:

ATTENDANCE IS MANDATORY! Students must notify instructor 24 hours in advance if they plan on missing class.

Quizzes & Final Exam

There are 12 multiple choice quizzes online, one midterm exam (online) and one final comprehensive exam to be taken in class.

Quizzes: You will have one week to do each quiz and three attempts. Highest grade is recorded. The quizzes will be taken through Blackboard. The lowest quiz will be dropped.

Final Exam. Comprehensive final exam given on the last day of class. Final Exam will consist of 50 multiple choice questions and cannot be dropped. Midterm and Final exam are multiple choice. There will be fifty questions on the midterm and fifty questions on the final exam.

Research Project (50 points total):

1. Pick a topic relevant to this course which must be approved by the instructor.
2. Research your topic using:
 - internet
 - scientific journals
 - textbooks/ medical texts
3. Orally present your topic to the class using MS PowerPoint or Prezi.
(i.e. if disorder then include: definition, symptoms, where & how it affects the nervous system, prognosis & treatment).
4. Turn in at least three references articles used in research for project and copy of MS Power Point Presentation.

Presentation will consist of 25 slides minimum, including title slide and reference slide. 15-20 minutes to present your topic in clear, concise manner.

Grading Scale:

GRADING

A = 90-100% D = 60-69%
B = 80-89% F = Below 60%
C = 70-79%

Quizzes = 40%
Oral Presentation =40%
Midterm & Final Exam =20%

TEXTBOOK:

1. Pinel, J.P. (2018). ***Biopsychology.***, Allyn & Bacon Pub, N.Y.
(REQUIRED)

Student Responsibilities

In order to be successful in this course each student must take responsibility for the following:

- Read the required readings
 - Attend class and turn in-class assignments in at end of class
 - Keeping up with the calendar of assignments
 - Contacting the instructor by email immediately when there is a true emergency that prevents submitting work by the due date or attending class
 - Having consistent and reliable access to a computer and to the internet
 - Checking regularly to view grades and comments from me
 - Posting and submitting quizzes before midnight on due date
 - Adhering to the Student Code of Conduct
 - Following proper protocol for withdrawing from class if needed

Academic Honesty:

Students are expected to comply with the academic policy of UNM – Valencia. Any academic dishonesty will result in expulsion from the course. Your writing assignments must not be plagiarized. Plagiarism means using or copying language and/or ideas without acknowledging where you got them. Plagiarism includes copying another student's paper or ideas, downloading and turning in papers from the Internet, copying passages from sources without proper documentation, or rephrasing an author's ideas and then presenting them as your own original thoughts. To learn how to avoid plagiarism you can talk to me, or consult a tutor. If you would like even more information about plagiarism, The Owl at Purdue website offers sage advice:

<http://owl.english.purdue.edu/owl/resource/589/01>

If you do plagiarize, you will face one or more of the following consequences: failing the assignment, failing the course, or facing disciplinary action taken by the University. The University considers plagiarism a serious form of academic dishonesty or stealing.

Academic Integrity

Having academic integrity is paramount to your success in any class. Plagiarism or cheating is not tolerated. Any instance of this will result in a grade of zero for that assignment. Here is the link to the UNM Academic Dishonesty Policy: <https://policy.unm.edu/regents-policies/section-4/4-8.html>. The policy states:

Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. The University reserves the right to take disciplinary action, up to and including dismissal, against any student who is found guilty of academic dishonesty or who otherwise fails to meet the expected standards. Any student judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question and/or for the course.

Academic Dishonesty is defined as:

"Academic dishonesty" includes, but is not limited to, dishonesty in quizzes, tests, or assignments; claiming credit for work not done or done by others; hindering the academic work of other students; misrepresenting academic or professional qualifications within or without the

University; and nondisclosure or misrepresentation in filling out applications or other University records.

STUDENTS WITH DISABILITIES: Include a statement such as the following:

jmlujan@unm.edu. If you have a documented disability, the Equal Access Services office will provide me with a letter outlining your accommodations. I will then discuss the accommodations with you to determine the best learning environment. If you feel that you need accommodations, but have not documented your disability, please contact Jeanne Lujan, the coordinator for Equal Access Services at 925-8910 or

Addendum to the Syllabus

Classroom policies and procedures.

I have seen many behaviors over the course of my years of teaching that I have found very disrespectful to myself and other students. I feel it is necessary to have these policies to try and bring civility back to the classroom.

1. **Absences.** Attendance is required for all class periods. I take attendance very seriously. If you cannot make it to class on a regular basis, I would strongly suggest finding another course. **DO NOT** make doctor's appointments during my scheduled class periods. Also, do not make appointment to meet with other instructors for conferencing during my scheduled classes. You will be counted absent in these cases.
2. **Laptops.** Students will not be allowed to use a laptop in this class unless it is for the sole purpose of taking notes. Any other use such as surfing the internet, IM, e-mail or Facebook, etc. is not allowed in my class. If it is discovered that this is occurring the student will be told to shut off the laptop and not bring it to class again.
3. **No Headphones.** You are not allowed to have headphones in your ears during class.
4. **Cell Phones.** Cell phones must be turned off during class. Unless it is an emergency then you need to have your cell phone turned on silent & vibrate mode. If you must take the call, please leave the classroom and talk outside. Text messaging is not allowed in class. Anyone caught texting in class while be warned and if it occurs again, told to leave the class.
5. **Homework from other classes.** You will not be allowed to do homework for other classes during my class period. Please do it before or after my class.
6. **Books, magazines, newspapers, etc.** are not allowed in my class. If you are caught reading other materials not related to the class (such as the textbook), you will be asked to refrain from doing so.
7. **Respecting other students' opinions.** I firmly believe that we must have respect for each other and to try and be civil to one another. Anyone swearing, hollering or being disrespectful to myself or others will not be tolerated, and the person will be asked to leave the class.

LECTURE/READING ASSIGNMENTS

	Topic	Chapter
I	Introduction to Biological Psychology	1
II	Anatomy of the Nervous System	3, 9
III	EXAM #1/ Nerve Cells, Synapses & Transmission (chapters 1 & 3)	4
IV	Research Methods/ Human Brain Damage	5 & 10
V	Human Brain Damage	
VII	Visual System/ Perception & other senses	6 & 7
VIII	MIDTERM EXAM/ Hormones & Sex	13
IX	Hormones & Sex/ Sleep	13 & 14
X	Drug Addiction/ Memory	15
XI	Memory	11
XII	Lateralization of Language/ Cortical Localization of Function	16
XIII	Lateralization, of Language, Split Brain	16
XIV	ORAL PRESENTATIONS	
XV	ORAL PRESENTATIONS	
XVI	COMPREHENSIVE FINAL EXAMINATION ORAL PRESENTATIONS	