PSY 330: FOUNDATIONS OF BEHAVIORAL NEUROSCIENCE, Winter 2018
Section 04: 1:00-2:55 PM, TTh 2320 AuSable Hall
Section 06: 10:00-11:15 AM TTh 205 Lake Huron Hall

Instructor: Glenn R. Valdez, Ph.D.
Office: 1313 AuSable Hall
Office hours: TTh, 11:30 AM-12:30 PM **and by appointment**
Phone: 616-331-3798 (office)
Email: valdezg@gvsu.edu

Text: Carlson, N.R. (2014) Foundations of Behavioral Neuroscience (9th edition). Needham Heights, MA: Allyn & Bacon.

Readings (will be posted on Blackboard):

Koenigs M, Young L, Adolphs R, Tranel D, Cushman F, Hauser M, Damasio A. (2007) Damage to the prefrontal cortex increases utilitarian moral judgments. Nature. 446: 908-11.

LeVay, S. (1991) A difference in hypothalamic structure between heterosexual and homosexual men. Science. 253:1034-7.

White HK, Levin ED. (1999) Four-week nicotine skin patch treatment effects on cognitive performance in Alzheimer's disease. Psychopharmacology. 143:158-65.

Kraehenmann R, Preller KH, Scheidegger M, Pokorny T, Bosch OG, Seifritz E, Vollenweider FX. (2014) Psilocybin-Induced Decrease in Amygdala Reactivity Correlates with Enhanced Positive Mood in Healthy Volunteers. Biol Psychiatry. 2014 Apr 26. pii: S0006-3223(14)00275-3. doi: 10.1016/j.biopsych.2014.04.010 [Epub ahead of print]

Course Homepage on Blackboard: http://bb.gvsu.edu. Pertinent information (e.g., announcements, syllabi, etc.) will be available on blackboard.

Course Description:

This course provides an introduction to Behavioral Neuroscience, the scientific study of the interaction between biological processes and behavior. Topics covered include the basic structure of the nervous system, research methods in behavioral neuroscience, psychopharmacology, and neural mechanisms involved in sensory and perceptual processes, and psychiatric disorders. Prerequisites: PSY 101 - Introductory Psychology

Office Hours:

If you cannot make it to my regular office hours, please feel free to schedule an appointment at another time. I also keep an open door policy so feel free to stop in anytime my door is open.

Course Attendance:

Roll will not be taken and attendance is not mandatory. **You are, however, responsible for all announcements and lecture materials presented in class.** In addition, **exams will include material that is covered in class and IS NOT in the textbook.** Therefore, you are strongly encouraged to attend every class.

Exams:

There will be four, non-cumulative exams that will be worth 100 points each. The exam format will be short essay questions and will be based on **what is covered in class. If you are unable to attend an exam due to an illness or family emergency, please notify me in writing before the exam or within 24 hours after the exam** and be prepared to provide documentation of the problem and promptly complete a make-up exam. **If you miss an exam and do not provide the appropriate documentation, you will receive a grade of 0 for that exam.**

Quizzes:

There will be two in class quizzes on the topics of Neurons and Neuroanatomy and Psychopharmacology worth 50 points each. The format will be short answer and fill in the blank. **The same policy stated above for missing and exam also applies to quizzes.**

Readings and Discussion:

Four research articles are assigned, which you will have to summarize and critique. The goal of this assignment is to understand some of the current research in the field of behavioral neuroscience. Assignment sheets for each article are posted on Blackboard, and must be turned in on the due dates listed below. Your answers must be typed within the space provided for each answer. These assignments are worth 25 points each. Discussion of these articles will occur during the class sessions in which they are due.

Course Grades: Grades will be based on your performance on examinations and the article summaries. **EXTRA CREDIT OPPORTUNITIES WILL NOT BE LIKELY.**

Lowest Exam	10%
Exam	20%
Exam	20%
Exam	20%
Quizzes	15%
Article Summaries	15%

Letter grades will be assigned according to the following scale (final grades are rounded to the nearest whole number):

A	93-100%
A-	90-92%
B+	87-89%
B	83-86%
B-	80-82%
C+	77-79%
C	73-76%
C-	70-72%
D+	67-69%
D	60-66%
F	≤ 59%

Accommodation for disability:

If there is any student in this class who has special needs because of a learning, physical or other disability, please contact the Disabilities Support Resources (DSR) Program in the Advising Resources and Special Programs Unit at 331-3588.

Tentative Course Schedule (Dates subject to change):

Date	**Topic**	**Reading**
1/9	Course Introduction	
1/11, 1/16, 1/18	Neurons & Neurotransmission	Chapter 2
1/23, 1/30	Neuroanatomy	Chapter 3
2/1	**Quiz: Neurons, Neurotransmission, and Neuroanatomy**	
2/1	Exam Review	
2/6	**Exam 1**	
2/8, 2/13, 2/15	Psychopharmacology	Chapter 4
2/20	**Quiz: Neurons, Neurotransmission, and Neuroanatomy**	
2/20, 2/22	Vision	Chapter 6
2/22, 2/27	Audition, Somatosenses, and Chemical Senses	Chapter 7
2/27	Exam Review	
3/1	**Exam 2**	
3/4-3/11	**Spring Break, No Classes**	

3/13, 3/15	Sex and Sex Differences	Chapter 9
3/15	**Assignment 1 Due**	**LeVay, 1991**
3/20, 3/22	Learning and Memory	Chapter 12
3/27, 3/29	Fear and Aggression	Chapter 10
3/29	**Assignment 2 Due**	**Koenigs et al., 2007**
3/29	Exam Review	
4/3	**Exam 3**	
4/5	Parkinson's Disease and Huntington's Disease	Chapter 14
4/10	Alzheimer's Disease	Chapter 15
4/10	**Assignment 3 Due**	**White & Levin, 1999**
4/12	Schizophrenia	
4/17	Anxiety Disorders and Mood Disorders	
4/17	**Assignment 4 Due**	**Kraehenmann et al., 2014**
4/19	Drug Abuse and Addiction	Chapter 14
4/19	Exam Review	
Monday 4/24	**Section 04 Final Exam, 10:00-11:50 AM**	
Tuesday 4/25	**Section 01 Final Exam, 4:00-5:50PM**	