

**PSY 330-02
FOUNDATIONS OF BEHAVIORAL NEUROSCIENCE
SUMMER 2025**

Instructor: Glenn R. Valdez, Ph.D.

Office: 1313 AuSable Hall

Office hours: **Available by appointment. Schedule through Navigate below**

<https://gvsu.campus.eab.com/pal/SJc6c1-HHk>

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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. This course is subject to the policies listed at <http://www.gvsu.edu/coursepolicies>.

Learning Objectives:

Upon successful completion of this course, students should be able to:

- Identify the structure and function of the major parts of the nervous system
- Describe the process of action potentials
- Describe the process of neurotransmission
- Identify the behavioral function of major brain chemical systems
- Discuss basic research in behavioral neuroscience
- Relate biological processes and concepts to everyday behavior

Course Blackboard Site: lms.gvsu.edu

All relevant content can be accessed through the course website on Blackboard. When you first access the site, click on the "Start Here" link in the course menu for a video tour of the site. Links to course content, course tools, and other relevant information can be found in the course menu. A detailed weekly course schedule can be found at the end of the syllabus. New weekly content will be made available on **Mondays at 12:01 AM**.

Technology Needs:

[Basic Technology Requirements](#) for Online and Hybrid courses can be found on the GVSU IT Online Education website. Also, please complete the [Four Steps for Readiness for Online Learning](#).

Communication:

I will be sending emails regularly (at least twice a week) through Blackboard. You are expected to check your GVSU email regularly for course announcements and updates. The best way to contact me is by email. Monday through Friday, I will check my email regularly between the hours of 9:00 AM-5:00 PM. I will generally respond to emails within 24 hours. If you do not receive a response after 24 hours, please feel free to follow up on the original email. I check my email occasionally during the weekend. However, I do reserve the right to limit my email access over the weekend so please do not expect a response until the following Monday unless it is something urgent. If your email is regarding an urgent matter (i.e. illness, family emergency, etc.), please include the word "URGENT" in the subject line, and I will do my best to respond to your email as soon as possible.

Office Hours:

Office hour meetings are available by appointment and may be scheduled through my Navigate link <https://gvsu.campus.eab.com/pal/SJc6c1-HHk>. All meetings will be held on Zoom. Once you schedule an appointment, you will receive the Zoom link for the meeting. I plan to be generally available for meetings from 10:00 AM to 3:00 PM, Monday-Thursday, but availability may vary from week to week. I am happy to find a time to meet outside of those times in needed. **If there are no available times that fit your schedule, please do not hesitate to email me so that we can figure out another time to meet.**

Texts:

Carlson, N.R., Birkett, M. (2020) Foundations of Behavioral Neuroscience (10th edition).

This text is available as an eBook in the Course Blackboard site as part of the GVSU Save program.

Research Articles (available on Blackboard):

LeVay S. A difference in hypothalamic structure between heterosexual and homosexual men. *Science*. 1991;253(5023):1034-1037. doi:10.1126/science.1887219

Kraehenmann R, Preller KH, Scheidegger M, et al. Psilocybin-Induced Decrease in Amygdala Reactivity Correlates with Enhanced Positive Mood in Healthy Volunteers. *Biol Psychiatry*. 2015;78(8):572-581. doi:10.1016/j.biopsych.2014.04.010

Learning Modules:

The course will be divided into learning modules based on each course topic. Video lectures and the accompanying PowerPoint slides with additional notes can be found in each module. You will be responsible for all material covered in these videos and on the

PowerPoint slides (including any additional notes in the slides). Links to quizzes, readings, online discussions, and other relevant materials will also be found in these modules.

Use of Artificial Intelligence in the Course:

AI-based assistance, such as ChatGPT and Copilot, should be used in the same way you would collaborate with your classmates in the course. You are welcome to talk about your ideas with classmates and AI-based assistants. **However, all work you submit must be your own.** You should never include in your assignment anything that was not written directly by you without proper citation (including quotation marks and in-line citation for direct quotes).

If you are unsure where the line is between collaborating with AI and copying from AI, use the following as a guideline for appropriate use of AI: Never hit "Copy" within your conversation with an AI assistant. You can copy your own work into your conversation, but do not copy anything from the conversation back into your assignment. Instead, use your interaction with the AI assistant as a learning experience, then let your assignment reflect your improved understanding. **Evidence of inappropriate use of AI, such as submitting fully AI generated text, will result in a zero for the assignment.** Also, please be aware that AI models such as ChatGPT predict and generate language based on probability and often provide inaccurate information. I strongly advise against using AI as a database to look up or explain course-related content.

Exams:

There will be three exams that will be worth 100 points each. The exam format will be short essays and will be based on **what is covered in the video lectures, PowerPoint slides, and readings.** The goal of the exams is to gauge your ability to integrate and explain concepts in a manner that goes beyond a simple repetition of facts and definitions. The number of questions and the point total for each question will vary between exams (6-7 questions). You will be required to answer all questions on the exam. Exams will be made available on Blackboard as Word Documents on the dates listed in the schedule.

I will only accept exams that are uploaded as Word Documents or PDF files. You will have one opportunity to submit the exam. If you have a technical issue when you submit the exam, please contact me right away so that I can assist you in turning in the exam. Feedback will be provided within the exam and gradebook using comments through Blackboard's grading tool.

Exams are open book/open note, and you are free to use the video modules, notes, and readings to complete the exams. However, the submitted exams must be your own individual work. **You may not work in groups or use AI assistants to complete the exam. Evidence of inappropriate use of AI, such as submitting fully AI generated text, will result in a zero for the exam.** The only time limitation for the exam is that it

must be submitted by the due date. See the weekly schedule for specific due dates. **After the due date, 20 points will be deducted from the overall grade per calendar day that the exam is turned in late.**

Quizzes:

Each learning module contains an online quiz based on the topics covered in the video lectures and readings. **The goal of these quizzes is to evaluate your basic understanding of the material.** These quizzes will consist of 10 multiple choice questions worth one point each, for a total of 10 points per quiz. **You will only have one attempt to submit the quiz.** You are free to use the video modules, notes, and readings to complete the quizzes. If a technical error occurs and your quiz is not submitted properly, please email me as soon as possible. **All quizzes will be due on a Sunday by 11:59 PM.**

Research Article Assignments:

There will be two assignments based specifically on the required research articles listed above. **The goal of these articles is to expose you to some of the classic and current research in the field of behavioral neuroscience, and assess your ability to critically examine them.** These assignments will consist of short answer questions. These assignments will be worth 25 points each.

Assignment sheets will be made available in the relevant Learning Module in Blackboard as Word Documents. They must be completed and uploaded by the due dates listed in the schedule. **Evidence of inappropriate use of AI, such as submitting fully AI generated text, will result in a zero for the assignment. I will only accept assignments that are uploaded as Word Documents or PDF files.** You will have two opportunities to submit the assignment in case you have a technical issue. If you are still having technical issues when after your second attempted upload, please contact me so that I can assist you in turning in the exam. **Only the most recent submission will be graded.** Feedback will be provided within the assignment and gradebook using comments through Blackboard's grading tool.

Your answers to the questions will be worth a total of 20 points. The number of questions and points per question will vary for each assignment. The remaining 5 points will be based on the following criteria:

- Formatting: The assignment was uploaded to Blackboard as a Microsoft Word Document or PDF file. The assignment was uploaded to Blackboard as a Microsoft Word Document or PDF file. Questions and instructions were not deleted and answers are single-spaced in standard 12-point font. The assignment does not exceed the 3-page maximum limit.
- Spelling and Grammar: Your assignment should be free of typos, spelling errors, and grammatical errors.

All assignments will be due on a Sunday by 11:59 PM (see specific dates in the weekly course schedule). **After the due date, 5 points will be deducted from the overall grade per calendar day that the assignment is handed in late.**

Video Discussions:

There will be four graded discussions during the semester, worth 10 points each, using Blackboard's Padlet tool. These discussions may be accessed directly in Blackboard.

The topics for these discussions are:

- Introductions
- Non-Medical Use of Adderall
- Criminal Behavior and Biology
- Stigma and Psychiatric Disorders

The goal of this assignment is to allow us to have more interactive discussions regarding contemporary topics in the field of behavioral neuroscience, and to help create more of a sense of community within the class. For each topic, you will be required to record a post regarding the discussion topic that will be worth 10 points. These posts **will be due on a Sunday by 11:59 PM** (see specific dates in the weekly course schedule). **After the due date, 2 points will be deducted from the overall grade per calendar day for late submissions.**

Course Grades:

Grades will be based on your performance on examinations, quizzes, research article assignments, and video discussion assignments. **EXTRA CREDIT OPPORTUNITIES WILL NOT BE LIKELY.** Grades are calculated based on the following point values.

Exam 1	100 points
Exam 2	100 points
Exam 3	100 points
Quizzes	110 points
Research Article Assignments	50 points
Video Discussions	40 points
Total Available Points	500 points

Letter grades will be assigned according to the following scale. Final grades are calculated as the percentage of points based on the of the total points available and 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

Please consider this general description of what each grade means.

- F/D/D+: Despite your best efforts, you are struggling with the material and need help to understand why you are having difficulty. **Please set up an appointment so that we can determine the best course of action for you if you fall in this range.**
- C-/C/C+: You did all the necessary work. You learned all the basic material and **know the correct answers.**
- B-/B/B+: You did all the necessary work. You learned all the basic material, and you know the correct answers. Plus you really get the material. You **understand the correct answers** and could teach it to a friend.
- A-/A: You did all the necessary work. You learned all the basic material, and you know the correct answers. You really get the material. You understand the correct answers and could teach it to a friend. Plus you can use it flexibly and adaptively. You **understand WHY the answers are what they are, and how this material can be applied to different situations.**

Academic Integrity:

The principles of truth and honesty are recognized as fundamental to a community of teachers and scholars. The university expects that both faculty members and students will honor these principles and in so doing protect the validity of university grades. This means that **all academic work will be done by the student to whom it is assigned without unauthorized aid of any kind**. Compliance shall include compliance with the following specific rules:

1. No student shall knowingly, without authorization, procure, provide, or accept any materials which contain questions or answers to any examination or assignment.
2. No student shall, without authorization, complete, in part or in total, any examination or assignment for another person.
3. No student shall, without authorization, allow any examination or assignment to be completed, in part or in total, by another person.
4. No student shall knowingly plagiarize or copy the work of another person and submit it as their own.
5. No student shall submit work that has been previously graded or is being submitted concurrently to more than one course without authorization from the instructor(s) of the class(es) to which the student wishes to submit it.

Accommodation for Disability:

If you are in need of accommodations due to a learning, physical, or other disability you must present a memo to me from Student Accessibility Resources, indicating the existence of a disability and the suggested reasonable accommodations. If you have not already done so, please contact the Student Accessibility Resources office (215 CON) by calling 331-2490 or email to access@gvsu.edu. Please note that I cannot provide accommodations based upon disability until I have received a copy of the issued memo. All discussions will remain confidential.

Weekly Course Schedule (Subject to change)

Week	Readings and Online Video Lectures	Assignments
Week 1 6/23-6/29	Learning Module: Neurons and Neurotransmission <u>Required Videos</u> <ul style="list-style-type: none"> - Neurons and Neurotransmission <u>Recommended Readings</u> <ul style="list-style-type: none"> - Carlson & Birkett: Chapter 2 Learning Module: Neuroanatomy <u>Required Videos</u> <ul style="list-style-type: none"> - Neuroanatomy <u>Recommended Readings</u> <ul style="list-style-type: none"> - Carlson & Birkett: Chapter 3 	Due <u>Sunday</u> by 11:59 PM <ul style="list-style-type: none"> - Padlet: Introductions - Neurons and Neurotransmission Quiz - Neuroanatomy Quiz
Week 2 6/30-7/6	Learning Module: Psychopharmacology <u>Required Videos</u> <ul style="list-style-type: none"> - Psychopharmacology <u>Recommended Readings</u> <ul style="list-style-type: none"> - Carlson & Birkett: Chapter 4 Learning Module: Neurotransmitter Systems <u>Required Videos</u> <ul style="list-style-type: none"> - Neurotransmitter Systems <u>Recommended Readings</u> <ul style="list-style-type: none"> - Carlson & Birkett: Chapter 4 	Due <u>Sunday</u> by 11:59 PM <u>Required</u> <ul style="list-style-type: none"> - Padlet: Non-Medical Adderall Use - Psychopharmacology Quiz - Neurotransmitter Systems Quiz
Exam 1 7/7-7/8	Exam 1 <ul style="list-style-type: none"> - Neurons and Neurotransmission - Neuroanatomy - Psychopharmacology - Neurotransmitter Systems 	<u>Monday</u>, 7/7 at 12:01 AM <ul style="list-style-type: none"> - Exam 1 Available <u>Tuesday</u>, 7/8 by 11:59 PM <ul style="list-style-type: none"> - Exam 1 Due

Week	Readings and Online Video Lectures	Assignments
Week 3 7/7-7/13	Learning Module: Visual Perception <u>Required Videos</u> <ul style="list-style-type: none"> - Visual Perception <u>Recommended Readings</u> <ul style="list-style-type: none"> - Carlson & Birkett: Chapter 6 Learning Module: Auditory Perception and Somatosenses <u>Required Videos</u> <ul style="list-style-type: none"> - Auditory Perception - Somatosenses <u>Recommended Readings</u> <ul style="list-style-type: none"> - Carlson & Birkett: Chapter 7 	Due <u>Sunday</u> by 11:59 PM <ul style="list-style-type: none"> - Visual Perception Quiz - Auditory Perception and Somatosenses Quiz
Week 4 7/14-7/20	Learning Module: Fear and Aggression <u>Required Videos</u> <ul style="list-style-type: none"> - Fear and Aggression <u>Recommended Readings</u> <ul style="list-style-type: none"> - Carlson & Birkett: Chapter 11 Learning Module: Sex and Sex Differences <u>Required Videos</u> <ul style="list-style-type: none"> - Sex and Sex Differences <u>Required Reading</u> <ul style="list-style-type: none"> - LeVay, 1991 <u>Recommended Readings</u> <ul style="list-style-type: none"> - Carlson & Birkett: Chapter 11 	Due <u>Sunday</u> by 11:59 PM <u>Required</u> <ul style="list-style-type: none"> - Padlet: Criminal Behavior and Biology - Fear and Aggression Quiz - Sex and Sex Differences Quiz - LeVay Article Assignment
Exam 2 7/21-7/22	Exam 2 <ul style="list-style-type: none"> - Visual Perception - Auditory Perception and Somatosenses - Fear and Aggression - Sex and Sex Differences 	<u>Monday</u>, 7/21 at 12:01 AM <ul style="list-style-type: none"> - Exam 2 Available <u>Tuesday</u>, 7/22 by 11:59 PM <ul style="list-style-type: none"> - Exam 2 Due

Week	Readings and Online Video Lectures	Assignments
Week 5 7/21-7/27	Learning Module: Learning and Memory <u>Required Videos</u> <ul style="list-style-type: none"> - Learning and Memory <u>Recommended Readings</u> <ul style="list-style-type: none"> - Carlson & Birkett: Chapter 13 	Due <u>Sunday</u> by 11:59 PM <u>Required</u> <ul style="list-style-type: none"> - Learning and Memory Quiz
Week 6 7/28-8/3	Learning Modules: Neurological Disorders <u>Required Videos</u> <ul style="list-style-type: none"> - Alzheimer's Disease - Parkinson's Disease <u>Recommended Readings</u> <ul style="list-style-type: none"> - Carlson & Birkett: Chapter 15 (only the subsections on Dementia and Parkinson's Disease) Learning Module: Psychiatric Disorders <u>Required Videos</u> <ul style="list-style-type: none"> - Mood Disorders - Anxiety Disorders - Schizophrenia <u>Required Reading</u> <ul style="list-style-type: none"> - Kraehenmann et al., 2015 <u>Recommended Readings</u> <ul style="list-style-type: none"> - Carlson & Birkett: Chapter 16 	Due <u>Sunday</u> by 11:59 PM <ul style="list-style-type: none"> - Neurological Disorders Quiz - Padlet: Stigma and Psychiatric Disorders - Psychiatric Disorders Quiz - Kraehenmann et al. Article Assignment
Exam 3 8/4-8/5	Exam 3 <ul style="list-style-type: none"> - Learning and Memory - Neurological Disorders - Psychiatric Disorders 	<u>Monday</u>, 8/4 at 12:01 AM <ul style="list-style-type: none"> - Exam 3 Available <u>Tuesday</u>, 8/5 by 11:59 PM <ul style="list-style-type: none"> - Exam 3 Due