

PSY 432: PSYCHOPHARMACOLOGY, Winter 2025

Section 01: Mon, Wed, and Fri, 1:00-1:50 PM, 2302 AuSable Hall

Section 02: Mon, Wed, and Fri, 12:00-12:50 PM, 168 Lake Ontario Hall

Instructor: Glenn R. Valdez, Ph.D.

Office: 1313 AuSable Hall

Office hours: Mon, Wed, Fri, 10:00-11:00 AM, 1313 AuSable Hall or by appointment through Navigate

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

Email: valdezg@gvsu.edu

Course Description: This course will examine the interactions between psychoactive drugs, the central nervous system, and behavior. Topics that will be covered include basic pharmacology, the nervous system, and the effects of various classes of psychoactive drugs on behavior. Prerequisites: PSY 101 and PSY 300 or SS 300 or equivalent. This course is subject to the GVSU policies listed at <http://www.gvsu.edu/coursepolicies/>.

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

- Describe basic pharmacological concepts such as agonists, antagonists, dose-effect curves, efficacy, and potency
- Identify the structure and function of 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 and how various classes of drugs affect them
- Discuss basic research in psychopharmacology
- Relate principles of psychopharmacology to everyday behavior

Course Attendance: This course will be taught in a traditional face-to-face format. I do not take attendance and technically speaking, simply missing class does not result in point deductions from your grade. **However, you are responsible for all material covered in class and in-class announcements.**

Please do NOT come to class if you are sick. At any point in the semester if you cannot come to class because you have symptoms, have had a potential COVID exposure, etc., you should contact me and we will work together to ensure you can still meet class requirements.

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 an overview 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.

Technology Needs: Although this course is being taught in a traditional face to face format, there are some basic technology requirements for the course.

High-speed internet access.

Laptop, tablet, and/or smartphone with a video camera and microphone. A video camera and microphone are only required if you would like to meet with me virtually. If you do not have a laptop, you may be able to apply for financial aid to help cover the cost of one. Please visit the GVSU [Special Circumstance & Financial Hardship Requests](#) site for more information. Laptops may also be checked out from the Library for up to four hours with a photo ID.

Microsoft Office. As a GVSU student, you have access to Microsoft Office 365 for free. You will find the information on how to access this at <http://www.gvsu.edu/it/softwarehardware-discounts-31.htm>.

Zoom. I will be holding virtual appointments through Zoom. All current term enrolled students are eligible to use the GVSU Zoom Business license. You can find more information at <https://www.gvsu.edu/it/gvsu-zoom-business-plan-247.htm>

Communication: I will be sending emails regularly (at least once 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: My regularly scheduled office hours will be held face to face in my office (1313 AuSable Hall) on Mondays, Wednesdays, and Fridays from 10:00-11:00 AM. I also keep an “Open Door Policy” so please feel free to drop in any time I am in my office and the door is open or knock if the door is closed. I am also available to meet in person or online outside of my regularly scheduled office hours by appointment. Appointments can be scheduled through the “Book an Appointment” link on Blackboard or through the link above.

Psych Friends Peer-to-Peer Mentors: Psych Friends mentors are upper-level psychology and behavioral neuroscience students who provide guidance and support in many areas, such as: effective studying and time management techniques,

understanding the PSY and BNS major requirements, careers in the field, and the process of applying for graduate school. Visit <https://www.gvsu.edu/navigate> to schedule an online or in-person meeting today!

Text: Hancock, SD, McKim, WA. (2018) *Drugs and Behavior: An Introduction to Behavioral Pharmacology* (8th edition).

This text is available as an eBook in the Course Blackboard site as part of the GVSU Save program. You can also rent or purchase an electronic version of the text online via the websites below.

RedShelf: <https://redshelf.com/book/625155/drugs-and-behavior-625155-9780134492438-stephanie-hancock-william-mckim>

Research Articles (available on Blackboard):

Required Articles for Assignments

Cropsey KL, Schiavon S, Hendricks PS, Froelich M, Lentowicz I, Fargason R. Mixed-amphetamine salts expectancies among college students: Is stimulant induced cognitive enhancement a placebo effect?. *Drug Alcohol Depend.* 2017;178:302-309. doi:10.1016/j.drugalcdep.2017.05.024

Greene KM. Perceptions of driving after marijuana use compared to alcohol use among rural American young adults. *Drug Alcohol Rev.* 2018;37(5):637-644. doi:10.1111/dar.12686

Additional Articles for Assignments

Arria AM. Nonmedical Use of Prescription Stimulants and Analgesics: Associations with Social and Academic Behaviors among College Students. *J Drug Issues.* 2008;38(4):1045-1060. doi:10.1177/002204260803800406

Arria AM, Geisner IM, Cimini MD, et al. Perceived academic benefit is associated with nonmedical prescription stimulant use among college students. *Addict Behav.* 2018;76:27-33. doi:10.1016/j.addbeh.2017.07.013

Chan E, Fogler JM, Hammerness PG. Treatment of Attention-Deficit/Hyperactivity Disorder in Adolescents: A Systematic Review. *JAMA.* 2016;315(18):1997-2008. doi:10.1001/jama.2016.5453

Fairman KA, Davis LE, Peckham AM, Sclar DA. Diagnoses of Cardiovascular Disease or Substance Addiction/Abuse in US Adults Treated for ADHD with Stimulants or Atomoxetine: Is Use Consistent with Product Labeling?. *Drugs Real World Outcomes.* 2018;5(1):69-79. doi:10.1007/s40801-017-0129-2

Hartman RL, Brown TL, Milavetz G, et al. Cannabis effects on driving lateral control with and without alcohol. *Drug Alcohol Depend.* 2015;154:25-37. doi:10.1016/j.drugalcdep.2015.06.015

Ilieva I, Boland J, Farah MJ. Objective and subjective cognitive enhancing effects of mixed amphetamine salts in healthy people. *Neuropharmacology.* 2013;64:496-505. doi:10.1016/j.neuropharm.2012.07.021

Kvålseth TO. Effects of marijuana on human reaction time and motor control. *Percept Mot Skills.* 1977;45(3 Pt 1):935-939. doi:10.2466/pms.1977.45.3.935

Lenné MG, Dietze PM, Triggs TJ, Walmsley S, Murphy B, Redman JR. The effects of cannabis and alcohol on simulated arterial driving: Influences of driving experience and task demand. *Accid Anal Prev.* 2010;42(3):859-866. doi:10.1016/j.aap.2009.04.021

Moran LV, Ongur D, Hsu J, Castro VM, Perlis RH, Schneeweiss S. Psychosis with Methylphenidate or Amphetamine in Patients with ADHD. *N Engl J Med.* 2019;380(12):1128-1138. doi:10.1056/NEJMoa1813751

Peterkin AL, Crone CC, Sheridan MJ, Wise TN. Cognitive performance enhancement: misuse or self-treatment?. *J Atten Disord.* 2011;15(4):263-268. doi:10.1177/1087054710365980

Course Topics: The course Blackboard site is organized by course topic. PowerPoint slides with additional notes can be found in each course topic folder. 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.

Course Deadlines: All assignments are expected to be completed by the due date listed in the weekly course schedule. **However, accommodations – extended/alternative deadlines, waiving late work point deductions – are available for the following “excused” reasons:**

- intercollegiate event (e.g., sports travel) or University-sponsored event (e.g., class field trip)
- observance of religious holidays
- military duty
- jury duty, or appearance in court or other government hearings
- birth or adoption of child
- attendance at an academic and/or professional conference
- medical or professional appointments (e.g., job interviews, graduate school interviews, doctor’s appointment)
- student medical conditions (e.g., COVID quarantine, hospitalization) that significantly limit ability to engage with the course material
- medical conditions of a loved one if the student is serving as a caretaker
- death of a loved one, funerals or memorial services
- conflicts due to childcare

This list is not exhaustive. If you believe your reason/experience fits the general rationale behind “excused” (e.g., circumstances beyond your control despite your best efforts to take control), please reach out to discuss it. **The following is a list of reasons that are unexcused and NOT eligible for accommodations:**

- vacation travel, this includes leaving campus early/arriving back late for long weekends
- forgetting or mixing up deadlines
- improperly submitting the assignment, or submitting an incomplete or inaccessible version
- conflicts due to work schedules (although training appointments for work are considered excused)
- incarceration

To request an accommodation please contact me as soon as possible to discuss your situation. If you are unsure whether you are eligible for accommodations, just ask.

Exams: There will be three in class exams that will be worth 100 points each. The exam format will be fill in the blank, short answer, and short essays. **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.** You will be required to answer all questions on the exam. You do not need to answer the short essay questions in strict essay format, and you may include diagrams, bullet points, etc. to clarify your answers. Your exams will be graded mainly on the content of your answers. Minor grammatical errors will not be penalized. However, grammatical errors that make your answers difficult to understand and/or spelling errors that change the meaning of the answer will result in point deductions. **See the weekly schedule for specific exam dates.**

Quizzes: There will be 13 online quizzes based on the topics covered in the course. **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.** Once you submit the quiz, you will no longer be able to revise your answers. You are free to use your notes, readings, and other supplemental materials 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 Friday by 11:59 PM** (see specific dates in the weekly course schedule). **Late quizzes will only be accepted due to excused reasons as outlined above.**

Your score will be available upon submission of the quiz. Correct answers will be available for you to review after the due date for the quiz. See the video tutorial on Blackboard for instructions on how to review your quizzes.

Research Paper Assignments: There will be two research paper assignments based on the required research articles and relevant course content. **The goal of this assignment is to assess your ability to understand current research in the field of psychopharmacology, and to integrate the course material when examining the real-world implications of this research.** Each assignment is worth 50 points. See the Research Paper Assignment Sheet for more details.

The general topics of these papers are:

- Non-medical Use of Stimulants
- Marijuana Use and Driving

Assignment sheets will be made available in the Research Paper Assignment folder in Blackboard as Word Documents. Assignments must be completed and uploaded to the same folder on Blackboard. **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. If you are using another program to write the paper (Pages, Google Docs, etc.), please export the file to a Word Document or PDF file (instructions for how to do so are posted in Blackboard).** Feedback will be provided within the paper and gradebook on using comments through Blackboard's grading tool. **All assignments will be due on a Friday by 11:59 PM** (see specific dates in the weekly course schedule). **After the due date, 10 points will be deducted from the overall grade per calendar day that the assignment is turned in late unless there is an excused reason for the late submission.**

Online Video Discussions: There will be three 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
- What is a Drug?
- Psychiatric Medications

The goal of this assignment is to allow us to have more interactive discussions regarding contemporary topics in the field of psychopharmacology. 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 Friday 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 unless there is an excused reason for the late submission.**

Course Grades: Grades will be based on your performance on examinations, quizzes, short papers, discussion assignments, and in-class participation. **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	130 points
Research Paper Assignments	100 points
Padlet Discussions	30 points
Total Available Points	560 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 Disability Support 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.

Furthermore, if you have a physical disability and think you will need assistance evacuating this classroom and/or building in an emergency situation, please make me aware so I can develop a plan to assist you.

Weekly Course Schedule (Subject to change)

Week	Date	Readings	Assignments
Week 1	1/6 Course Introduction	Required Readings: - Syllabus	Due Friday, 1/10 by 11:59 PM - Neurons and Neurotransmission Quiz - Padlet: Introductions
	1/8, 1/10 Neurons and Neurotransmission	Required Video Lectures - Synapses - Receptors Recommended Readings - Hancock & McKim: Chapter 4	
Week 2	1/13, 1/15, 1/17 Neurotransmitter Systems and Neuroanatomy	Required Video Lectures - Cerebral Cortex - Lower Brain Regions Recommended Readings - Hancock & McKim: Chapter 4	Due Friday, 1/17 by 11:59 PM - Neurotransmitter Systems and Neuroanatomy Quiz
Week 3	1/20 Martin Luther King Jr. Day Recess No Class		
	1/22, 1/24 Basic Pharmacology	Required Video Lectures - Absorption - Efficacy and Potency - Agonists - Antagonists Recommended Readings - Hancock & McKim: Chapters 1, 2, 3	Due Friday, 1/24 by 11:59 PM - Padlet: What is a Drug?
Week 4	1/27, 1/29, 1/31 Basic Pharmacology continued	Required Video Lectures - Absorption - Efficacy and Potency - Agonists - Antagonists Recommended Readings - Hancock & McKim: Chapters 1, 2, 3	Due Friday, 1/31 by 11:59 PM - Basic Pharmacology Quiz

Week	Date	Readings	Assignments
Week 5	2/3 Drug Addiction	Recommended Readings - Hancock & McKim: Chapter 5	Due Friday, 2/7 by 11:59 PM - Drug Addiction Quiz
	2/5 Exam 1 Review		
	2/7 EXAM 1 - Neurons and Neurotransmission, Neurotransmitter Systems and Neuroanatomy, Basic Pharmacology, Drug Addiction		
Week 6	2/10, 2/12, 2/14 Alcohol	Recommended Readings - Hancock & McKim: Chapter 6	Due Friday, 2/14 by 11:59 PM - Alcohol Quiz
Week 7	2/17, 2/19 Sedative Hypnotics	Recommended Readings - Hancock & McKim: Chapter 6	Due Friday, 2/21 by 11:59 PM - Sedative Hypnotics Quiz
	2/21 Psychostimulants		
Week 8	2/24, 2/26, 2/28 Psychostimulants	Required Video Lectures - Rate Dependency Hypothesis - Non-Medical Psychostimulant Use - Harmful Effects of Psychostimulants Required Reading - Cropsey et al, 2017 Recommended Readings - Hancock & McKim: Chapter 10	Due Friday, 2/28 by 11:59 PM - Cropsey et al. Assignment - Psychostimulants Quiz
Week 9	3/2-3/9 Spring Break No Classes		
Week 10	3/10, 3/12 Nicotine	Recommended Readings - Hancock & McKim: Chapter 8	Due Friday, 3/14 by 11:59 PM - Nicotine Quiz
	3/14 Exam 2 Review		

Week	Date	Readings	Assignments
Week 11	3/17 EXAM 2 Sedative Hypnotics, Alcohol, Psychostimulants, Nicotine		
	3/19, 3/21 Caffeine	Recommended Readings - Hancock & McKim: Chapter 9	Due Friday, 3/21 by 11:59 PM - Caffeine Quiz
Week 12	3/24, 3/26, 3/28 Opioids	Recommended Readings - Hancock & McKim: Chapter 11	Due Friday, 3/28 by 11:59 PM - Opioids Quiz
Week 13	3/31, 4/2, 4/4 Antipsychotics	Recommended Readings - Hancock & McKim: Chapter 12	Due Friday, 4/4 by 11:59 PM - Antipsychotics Quiz - Padlet: Psychiatric Medications
Week 14	4/7, 4/9, 4/11 Antidepressants and Psychedelics	Recommended Readings - Hancock & McKim: Chapters 13 and 15	Due Friday, 4/11 by 11:59 PM - Antidepressants and Psychedelics Quiz
Week 15	4/14, 4/16, 4/18 Cannabinoids	Required Video Lectures - Cannabinoid Pharmacology - Behavioral Effects - Legalization Required Readings - Greene, 2018 Recommended Readings - Hancock & McKim: Chapter 14	Friday, 4/18 by 11:59 PM - Greene Assignment - Cannabinoids Quiz
Finals Week	Section 01 Monday, 4/21 12:00-1:50 PM	EXAM 3 - Caffeine, Opioids, Antipsychotics, Antidepressants and Psychedelics, Cannabinoids	
	Section 02 Wednesday, 4/23 12:00-1:50 PM		