

PSY 432: PSYCHOPHARMACOLOGY, Winter 2020
Section 01: 1:30-2:45 PM, MW 1310 Au Sable Hall

Instructor: Glenn R. Valdez, Ph.D.
Office: 1313 AuSable Hall
Office hours: MWF, 11:00 AM -12:00 PM **and by appointment**
Phone: 616-331-3798 (office)
Email: valdezg@gvsu.edu

Text: McKim, WA, Hancock, SD. (2013) Drugs and Behavior: An Introduction to Behavioral Pharmacology (7th edition).

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

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. **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 fill in the blank, short answer and 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: Following the completion of each course topic, an online quiz will be posted on blackboard based on that topic. The quizzes will consist of 10 multiple choice questions worth one point each. **Quizzes must be completed by 11:59 PM on the due dates listed below in order to receive credit.**

Research Paper: You will be required to write a 5-8 page paper (not including the title page, abstract and references) on one of the five topics listed at the end of the syllabus in the Research Paper section. Your paper should be similar to the types of short review articles that you would find in a scientific journal. Your paper should not simply summarize the scientific literature on your topic but also provide a critique of the research, and explain how this research fits into the broader context of the topic. See the end of the syllabus for more information.

Course Grades: Grades will be based on your performance on examinations, quizzes and the research paper as outlined below. **EXTRA CREDIT OPPORTUNITIES WILL NOT BE LIKELY.**

Lowest Exam	10%
Exam	20%
Exam	20%
Exam	20%
Research Paper	20%
Quizzes	10%

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%

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. Grand Valley State University expects that both faculty and students will honor these principles, and in so doing, protect the validity of university grades. All academic work will be done by the student to whom it is assigned, without unauthorized aid of any kind. Instructors, for their part, will exercise care in the planning and supervision of academic work so that honest effort will be positively encouraged. Cheating and plagiarism are the two most obvious violations of academic honesty. In brief, plagiarism is borrowing ideas, words, organization, etc., from another source or person and claiming them as original. Such activity may result in failure of a specific assignment, an entire course, or, if flagrant, dismissal from the University. For further information, see the "Student Code."

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 are subject to change):

Date	Topic	Reading	Quiz Due Date
1/6	Course Introduction		
1/8, 1/13	Neurons, Neurotransmitters, and Neuroanatomy	Chapter 4	Fri. 1/17
1/15, 1/22, 1/27	Basic Pharmacology	Chapter 1 Chapter 3	Fri. 1/31
1/20	Martin Luther King Day, No Classes		
1/27	Paper Topic Due		
1/29	Drug Addiction; Exam Review	Chapter 5	Fri. 1/31
2/3	Exam 1		
2/5, 2/10	Alcohol	Chapter 6	Fri. 2/14
2/12	Anxiolytics, Sedative Hypnotics & GABA	Chapter 7	Fri. 2/14
2/12	Outline Due		
2/17	Nicotine & Acetylcholine	Chapter 8	Fri. 2/21
2/19	Caffeine, Methylxanthines & Adenosine; Exam Review	Chapter 9	Fri. 2/21
2/24	Exam 2		
2/26, 3/9	Psychostimulants & Dopamine	Chapter 10	Fri. 3/13
3/1-3/8	Spring Break, No Classes		
3/11, 3/16	Opiates & Opioids	Chapter 11	Fri. 3/20
3/18	First Drafts Due		
3/18, 3/23	Antipsychotics	Chapter 12	Fri. 3/27
3/25	Exam Review		
3/30	Exam 3		
4/1, 4/6	Antidepressants	Chapter 13	Fri. 4/10
4/8	Psychedelics	Chapter 15	Fri. 4/10
4/13, 4/15	Cannabinoids	Chapter 14	Fri. 4/17
4/15	Final Papers Due		
4/15	Exam Review		
Monday 4/20	Exam 4, 12:00-1:50PM		

Research Paper

Topic Due Date:	1/27/20
Outline Due Date:	2/12/20
First Draft Due Date:	3/18/20
Paper Due Date:	4/15/20

Topics, outlines, first drafts, and final papers are due by 11:59 PM on the dates listed. All are to be turned on Blackboard in the Research Paper section. Paper topics should be submitted as text submissions. Outlines, first drafts, and final papers should be uploaded as Word files using the following file name formats:

last name first name PSY 432 outline.docx (ex: Valdez Glenn PSY 432 outline.docx)

last name first name PSY 432 first draft.docx (ex: Valdez Glenn PSY 432 first draft.docx)

last name first name PSY 432 final paper.docx (ex: Valdez Glenn PSY 432 final paper.docx)

You will be required to write a 5-8 page paper on one of the five topics listed below, similar to the types of short review articles that you would find in a scientific journal. The title page, abstract and references do not count towards the page requirement. Your paper should be double-spaced, with one-inch margins and standard 12-point font. I have posted a sample paper and outline online for you to look over as an example.

Your paper should not simply summarize the scientific literature on your topic but also **provide a critical stance involving your topic. In addition, it should not be a simple summary of the biological mechanisms of the drug or drug class you choose to research but also involve insight into a larger societal issue.**

Your paper should contain at least 10 academic sources (ex. peer-reviewed research articles, review papers, edited book chapters, etc.). You may also use any additional sources (ex. textbook, news articles, relevant websites, etc.) but these will not be included as part of the 10 sources. Your citations and references do not need to follow strict APA formatting. However, they do need to follow the format of an academic journal.

Topics:

1. Use of psychostimulants such as Ritalin and Adderall by college students as a study aid
 - How do these drugs work biologically?
 - Are they as effective as students perceive?
 - What are the benefits vs the dangers?
2. Overuse of Ritalin and Adderall in children
 - How do these drugs work biologically?
 - What are the benefits vs the dangers?

- Are they really overprescribed and if so, is it really as dangerous as many may believe?
3. E-cigarettes vs. traditional cigarettes
 - How does nicotine work biologically?
 - How do they compare regarding health-related issues (ex. Exposure to toxic substances, second hand smoke or vapor, cardiovascular health, etc.)?
 - How do common beliefs compare to research findings?
 4. Legalized and recreational marijuana
 - How does marijuana drugs work biologically?
 - Safety vs potential dangers?
 - How do common beliefs compare to research findings?
 - New health and societal concerns
 5. Psychedelics as an alternative treatment for depression
 - Biological changes that occur during depression
 - How do psychedelics and traditional antidepressants work biologically?
 - How do psychedelics compare to traditional antidepressants?
 - Benefits vs. side effects.

Your paper should include the following sections:

- 1) Title Page: Your title and name
- 2) Abstract: A summary of your paper
- 3) Introduction: This section should give background on your topic and discuss why it is an important problem. Also, what is your overall hypothesis?
- 4) Biological Mechanisms of Your Drug/Drug Class: How does this drug affect the central nervous system?
- 5) How are these biological mechanisms involved in the overall problem you are researching?
- 6) What are your overall conclusions regarding your topic?

I know many of you are more familiar with PsychINFO with regard to finding sources. However, this database will not be very helpful for this assignment. The top source to use to search for articles is PubMed: <http://www.ncbi.nlm.nih.gov/PubMed>

The paper will be graded on the following criteria:

Paper Topic: 5 pts

After you submit your paper topic, you are free to change your topic at any time. Please let me know if you decide to change your topic so that I can point you in the right direction of appropriate resources. As long as you turn in your paper topic on time, you will get full credit for this portion of the paper.

Outline: 10 pts

Outlines should give an idea of the major points that you will cover in your paper and provide an overall structure for the paper. We will discuss requirements for the outlines in more detail closer to the due date. The goal of the outline is to start organizing the information you would like to cover. As long as you turn in your outline on time, you will get full credit for this portion of the paper.

First Draft: 10 pts

Your first draft should contain at least three pages of content, not including a title page, abstract, or references. The point of the first draft is to gauge your progress on the research and writing process. If you are still organizing your ideas for certain sections of the paper, just include bullet points about what you hope to discuss in those sections. I do not expect a polished piece of writing for your first draft. I only expect that your first draft exists and is something that we can improve on. As long as you turn in your first draft on time, you will get full credit for this portion of the paper.

References: 10 pts

Your paper should contain at least 10 academic sources. Academic sources include peer-reviewed research articles, review papers published in scientific journals, edited book chapters in academic books, and academic books. You may also use any additional sources (ex. textbook, news articles, relevant websites, etc.) but these will not be included as part of the 10 sources. If your paper contains fewer than 10 academic sources, you will receive one point per academic source for this portion of your grade.

Formatting: 5 pts

Your paper should contain a Title Page, Abstract, Body, and Reference Section. The Title Page and Abstract should have their own separate pages. The body of the paper and Reference Section should begin on their own pages. Each reference should have an in text citation within the paper, and in text citations and references should follow a consistent format. The body of the paper should be 5-8 pages in length. Please note that 8 pages is the maximum limit points will be deducted if the body of the paper exceeds 8 pages.

Spelling and Grammar: 15 pts

Your paper should be free of typos and grammatical errors. All abbreviations must be defined when they are first used in both the Abstract and body of the paper.

Content: 25 pts

Your paper should describe research related to your topic, and this research should be the basis of your overall argument. Speculative arguments (i.e. statements that are not supported by any type of research finding) should be avoided.

Presentation: 20 pts

Your paper should have a clear objective. It should be organized in a logical and easy to follow manner. The paper should critically examine research rather than simply summarize the research findings. You should be able to demonstrate how the published research logically supports your argument and also point out the limitations of the research.

Late Submissions

Paper topic: After the due date, one point will be deducted from the topic portion of your paper grade per calendar day that the topic is handed in late.

Outline: After the due date, two points will be deducted from the outline portion of your paper grade per calendar day that the outline is handed in late.

First draft: After the due date, two points will be deducted from the first draft portion of your paper grade per calendar day that the first draft is handed in late.

Final draft: Paper topic: After the due date, 10 points will be deducted from the overall grade per calendar day that the paper is handed in late.