

**PSY 432:** PSYCHOPHARMACOLOGY, Spring 2018  
Section 01: 8:30-11:50 AM, TTh 1310 Au Sable Hall

**Instructor:** Glenn R. Valdez, Ph.D.  
*Office:* 1313 AuSable Hall  
*Office hours:* TTh, 12:00 PM-1:00 PM **and by appointment**  
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**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 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 three, 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 Friday 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 a relevant topic of your choice, similar to the types of short review articles that you would find in a scientific journal. Your paper should not simply review the scientific literature on your topic but also provide a critique of the research. 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	25%
Exam	25%
Research Paper	20%
Quizzes	20%

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%

**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):**

<b>Date</b>	<b>Topic</b>	<b>Reading</b>	<b>Quiz Due Date</b>
5/8	Course Introduction		
5/8	Neurons, Neuroanatomy, and Neurotransmitters	Chapter 4	<b>FRIDAY, 5/11</b>
5/10, 5/15	Basic Pharmacology	Chapter 1 Chapter 3	<b>FRIDAY, 5/18</b>
<b>5/10</b>	<b>Paper Topic Due</b>		
5/15	Drug Addiction	Chapter 5	<b>FRIDAY, 5/18</b>
5/17	Alcohol	Chapter 6	<b>FRIDAY, 5/18</b>
<b>5/17</b>	<b>Outline Due</b>		
<b>5/22</b>	<b>Exam 1</b>		
5/24	Anxiolytics, Sedative Hypnotics & GABA	Chapter 7	<b>FRIDAY, 5/25</b>
5/24	Nicotine & Acetylcholine	Chapter 8	<b>FRIDAY, 5/25</b>
5/29	Caffeine, Methylxanthines & Adenosine	Chapter 9	<b>FRIDAY, 6/1</b>
5/31	Psychostimulants & Dopamine	Chapter 10	<b>FRIDAY, 6/1</b>
<b>5/31</b>	<b>First Drafts Due</b>		
<b>6/5</b>	<b>Exam 2</b>		
6/7	Opiates & Opioids	Chapter 11	<b>FRIDAY, 6/8</b>
6/7	Antipsychotics	Chapter 12	<b>FRIDAY, 6/8</b>
6/11	Antidepressants	Chapter 13	<b>FRIDAY, 6/15</b>
6/11	Psychedelics	Chapter 15	<b>FRIDAY, 6/15</b>
6/14	Cannabinoids	Chapter 14	<b>FRIDAY, 6/15</b>
<b>6/14</b>	<b>Final Papers Due</b>		
<b>6/19</b>	<b>Exam 3</b>		

## Research Paper

<b>Topic Due Date:</b>	<b>Thursday 5/10/18</b>
<b>Outline Due Date:</b>	<b>Thursday 5/17/18</b>
<b>First Draft Due Date:</b>	<b>Thursday 5/31/18</b>
<b>Paper Due Date:</b>	<b>Thursday 6/14/18</b>

\*Topics, outlines, first drafts, and final papers are due by midnight on the dates listed. All are to be turned in over email. Please email your outlines, first drafts, and final papers to me as Word files using the file name formats below. **One point will be subtracted from your grade if your file name does not begin with your last name and then first name.**

{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 paper.docx (ex: Valdez Glenn PSY 432 paper.docx)

You will be required to write a 5-8 page paper on a relevant topic of your choice, 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 review paper and outline online for you to look over as an example.

Your paper should not simply review 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 issue. The primary purpose of this paper is to use empirical evidence to support your argument.**

**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.

Sample topics include but are not limited to:

- Use of psychostimulants such as Ritalin and Adderall by college students as a study aid
  - o Are they as effective as students perceive?
  - o What are the benefits vs the dangers?
- Overuse of Ritalin and Adderall in children
  - o What are the benefits vs the dangers?
  - o Are they really overprescribed and if so, is it really as dangerous as many may believe?
- Advances in drug treatments for Anxiety, Depression, Schizophrenia, OCD, etc.
  - o How do these newer treatments compare to traditional treatments?

- Medicinal marijuana
  - o Is it more effective than traditional medications when treating certain diseases?
  - o Benefits vs. side effects
- Legalized and recreational marijuana
  - o Safety vs potential dangers?
  - o Perception of safety
  - o New health and societal concerns
- Overuse of psychiatric medications
  - o Benefits vs. side effects
- Use of SSRI's to treat violent criminals
  - o Are they really effective?
  - o Ethical issues
- Psychedelics as an alternative treatment for depression
  - o How do they compare to traditional antidepressants?
  - o 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>

### 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

The paper will be graded on the following criteria:

Paper Topic: 5 pts

- Was the topic submitted on time?

Outline: 10 pts

- Was the outline submitted on time?
- Did the name of the file follow the appropriate format?

First Draft: 10 pts

- Was the first draft submitted on time?
- Did the name of the file follow the appropriate format?

References: 10 pts

- Does the paper contain the 10 required academic references as described above?

Formatting: 5 pts

- Did the name of the file follow the appropriate format?
- Is the paper double spaced?
- Does the paper use a standard 12 point font?
- Does the paper have a title page?
- Does the paper have an abstract?
- Does the paper contain 5-8 pages of content? This content does not include the title page, abstract or references.
- Are the references formatted in the style of an academic journal?

Spelling and Grammar: 10 pts

- Does the paper contain any misspellings, typos, or grammatical errors?
- Are all abbreviations defined and used consistently?

Content: 25 pts

- Does the paper discuss the biological mechanisms of the drugs or drug classes being discussed?
- Does the paper discuss original research in the area of the chosen topic?

Presentation:

25 pts

- Is the topic being discussed clearly presented?
- Does the paper have a clear focus and objective?
- Is the objective of the paper supported by discussion of research rather than simply speculation?
- Does the paper take a stance on the topic rather than simply being a description?
- Is the paper well organized?
- Is there research presented in critical way that discusses methods, results, conclusions, and limitations rather than just as a summary of findings?
- Is there a clear conclusion? Does the research presented support the conclusion?