

PSY 565: Advanced Topics in Neuroscience: Neuroscience of Addiction
Spring 2025

Class hours: MWF 9-9:50

Location: Funkhouser 214

Dr. Michael Bardo

Office: B447 BBSRB

Office hours: by appointment

Telephone: 257-6456

Email: mbardo@uky.edu

Colton Rippey (Teaching Assistant for Grading)

Office: 343 Waller Ave, Suite 205 (or Zoom)

Office hours: by appointment

Telephone: (623) 695-8327

Email: csri227@q.uky.edu

Student Learning Outcomes: It is assumed that you have a relatively extensive knowledge of the content of psychology and a reasonable command of the skills taught in PSY 100 and PSY 215, as well as fundamentals of neuroscience and biology. This course builds upon that knowledge. By the end of this course, you should improve in your abilities to:

1. Critically evaluate scientific research.
2. Identify and evaluate the implication of theory for research and vice versa.
3. Identify the implications for application of both theory and research findings.
4. Use evidence to support your reasoning and to evaluate the reasoning of others.
5. Communicate in writing and speaking.

In addition to those general learning objectives, the goal of this course is to teach these specific learning objectives:

1. Understand neural bases of normal and excessive drug-taking behaviors.
2. Characterize the various forms of addictive behavior.
3. Have a working knowledge of modern techniques that may reduce the initiation and maintenance of drug addiction.
4. Provide the experience of researching and evaluating literature bases that may be useful for professionals entering the medical and/or psychological service fields.

Prerequisite (Psychology Major, PSY 215 and 312 or permission of instructor).

Description of Course Activities and Assignments

Your grade in this class will be 250 total points possible, distributed as follows:

1. Two exams (50 points each=100 points total)
2. One oral presentation (50 points)
3. Ten written reaction papers (5 points each=50 points total)
4. Overall class participation (50 points)

An overall grade of 90% or greater is guaranteed an "A", 80% or greater at least a "B", 70% or greater at least a C, 60% or greater at least a D, and less than 60% an E.

(1) Exams (100 points): You will take two *in-person* exams as outlined in the syllabus. These will consist of identification and short-answer essays based the lecture material and group discussion of articles made available by the instructor. The material based on the oral presentations made by students will not be covered on the exam.

(2) Oral Presentation (50 points): Your oral presentation should be no more than 10 min long, given in-person to the whole class using Powerpoint slides. The main portion of the presentation will be to present a relevant journal article that is assigned by the

instructor or a research article of your own choosing, but with pre-approval by the instructor. If you choose your own article, you must send the instructor your article as a PDF at least 3 days before your presentation. The topic of the paper should be relevant to the theme being covered as outlined in the syllabus.

(3) Reaction Papers (50 points): Across the course of the semester, 10 different reaction papers will be given as an in-class assignment. These will occur immediately after the 2 scheduled oral student presentations of a research article. Each reaction paper will be worth 5 points. The reaction paper should briefly describe in 1-2 sentences the main finding of each of the two different articles that were presented and should then articulate a summary opinion about the 10-min discussion that occurs after presentation of both papers. While you do not need to cover all the following questions, these examples can shape your reaction:

- What were the strengths and weaknesses of the articles
- Do you agree or disagree with the class opinions that were expressed during the discussion?
- Does either article have any relevance to your own life or has any relevance for improving human health?
- What would be an interesting next step for the researcher to conduct in future work?

Each reaction paper will be a minimum of one page in length using double-spacing and 11-point font, with margins no greater than 1 inch. You may use AI, but it is unlikely that it will be helpful in preparing your paper beyond possibly correcting grammar, phrasing and misspellings. Before leaving class, your reaction paper will be uploaded to Canvas as either a WORD or PDF document. It will be graded anonymously (student ID only) by the TA using the following rubric:

Reaction Paper Rubric	
5	Excellent summary of the class discussion that followed the two paper presentations. Commentary provides solid understanding of the main finding from each article, along with strengths and issues of the papers.
4	Good summary of the class discussion that followed the two paper presentations. Commentary provides good understanding of the main finding from each article, along with strengths and issues of the papers.
3	Adequate summary of the class discussion that followed the two paper presentations. Commentary provides some understanding of the main finding from each article, along with strengths and issues of the papers.
2	Poor summary of the class discussion that followed the two paper presentations. Commentary provides some understanding of the main finding from each article, along with strengths and issues of the papers.
1	Summary or commentary is missing.
0	Assignment was not turned in.
Additional Considerations	-.5 pt for minor typos/grammar issues -1 pt for major typos/grammar issues -1 pt for over utilizing AI (>25% of paper)

(4) Class Participation (50 points): This is structured as an in-person course and the classroom does not allow for either Zoom or Echo360 recordings. In-person class attendance is not a course requirement, except for the exams, your oral presentation and completion of the 10 reaction papers. However, since 20% percent of your grade will be based on class participation, missing class sessions frequently will clearly damage this portion of your grade. If you have an excused absence (see below), I recommend that you provide that, as this will prevent you from having your participation suffer for those excused absence days. Given that class participation evaluation is rather subjective, I will inform you if your participation grade is in jeopardy. My overall recommendation: Come to class always/frequently, speak up, and engage in questions/answers during the discussion sessions.

Resources Required for Class: There is no textbook for the course and essentially all required materials (ppt lecture slides, research articles, etc) will be available online through Canvas. For reaction papers, you will need a word-processing electronic device for writing your assignment and submitting to Canvas for grading. If you do not have one, laptop loaners are available through the Young Library. For in-class exams, you will need a pen or pencil to work on a hardcopy of the examination proctored in class.

Excused Absences: Students need to notify the professor of absences prior to class when possible. S.R. 5.2.4.2 defines the following as acceptable reasons for excused absences: (a) serious illness, (b) illness or death of family member, (c) University-related trips, (d) major religious holidays, and (e) other circumstances found to fit “reasonable cause for nonattendance” by the professor.

Students anticipating an absence for a major religious holiday are responsible for notifying the instructor in writing of anticipated absences due to their observance of such holidays no later than the last day in the semester to add a class. Information regarding dates of major religious holidays may be obtained through the religious liaison, Mr. Jake Karnes (859-257-2754).

Students are expected to withdraw from the class if more than 20% of the classes scheduled for the semester are missed (excused or unexcused) per university policy.

Verification of Absences: Students may be asked to verify their absences in order for them to be considered excused. Senate Rule 5.2.4.2 states that faculty have the right to request “appropriate verification” when students claim an excused absence because of illness or death in the family. Appropriate notification of absences due to university-related trips is required prior to the absence.

Academic Integrity: Per university policy, students shall not plagiarize, cheat, or falsify or misuse academic records. Students are expected to adhere to university policy on cheating and plagiarism in all courses. The minimum penalty for a first offense is a zero on the assignment on which the offense occurred. If the offense is considered severe or the student has other academic offenses on their record, more serious penalties, up to suspension from the university may be imposed. Plagiarism and cheating are serious breaches of academic conduct. Each student is advised to become familiar with the various forms of academic dishonesty as explained in the Code of Student Rights and Responsibilities. plagiarism is defined at: <https://ombud.uky.edu/students/what-plagiarism> A plea of ignorance is not acceptable as a defense against the charge of academic dishonesty. It is important that you review this information as all ideas borrowed from others need to be properly credited.

Part II of *Student Rights and Responsibilities* (available at: <https://studentsuccess.uky.edu/student-conduct>) states that all academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression. In cases where students feel unsure about the question of plagiarism involving their own work, they are obliged to consult their instructors on the matter before submission.

When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording or anything else from another source without appropriate acknowledgement of the fact, the students are guilty of plagiarism. Plagiarism includes reproducing someone else's work, whether it be a published article, chapter of a book, a paper from a friend or some file, or something similar to this. Plagiarism also includes the practice of employing or allowing another person to alter or revise the work which a student submits as his/her own, whoever that other person may be.

Students may discuss assignments among themselves or with an instructor or tutor, but when the actual work is done, it must be done by the student, and the student alone. When a student's assignment involves research in outside sources of information, the student must carefully acknowledge exactly what, where and how he/she employed them. If the words of someone else are used, the student must put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes while leaving the organization, content and phraseology intact is plagiaristic. However, nothing in these Rules shall apply to those ideas which are so generally and freely circulated as to be a part of the public domain (Section 6.3.1).

Policy on AI: For most assignments in this course, the use of GenAI to complete any part of the submitted work is prohibited unless explicitly specified by the instructor. In instances where specific instruction/permission to use GenAI tools are provided, students must acknowledge any work that is not their own. This includes citations for outside scholarship or information gathered from other sources. It also means students will, through highlighting or the use of track changes, clearly delineate any text that is generated by a GenAI tool like ChatGPT. If you have any questions or concerns about this policy, contact your instructor before submitting any assignments.

Accommodations due to disability: If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (C330D Gatton Student Center and Suite 407 MDS Building) for coordination of campus disability services available to students with disabilities.

Class Recording Notification

The University of Kentucky Student Code of Conduct defines Invasion of Privacy as using electronic or other devices to make a photographic, audio, or video record of any person without their prior knowledge or consent when such a recording is likely to cause injury or distress.

Meetings of this course may be recorded. All video and audio recordings of lecturers and class meetings, provided by the instructors, are for educational use by students in this class only. They are available only through the Canvas shell for this course and are not to be copied, shared, or redistributed.

As addressed in the Student Code of Conduct, students are expected to follow appropriate university policies and maintain the security of linkblue accounts used to access recorded class materials. Recordings may not be reproduced, shared with those not enrolled in the class, or uploaded to other online environments.

If the instructor or a University of Kentucky office plans any other uses for the recordings, beyond this class, students identifiable in the recordings will be notified to request consent prior to such use. In anticipation of such cases, students may be asked to complete an "authorization of use" form by a faculty member.

Video and audio recordings by students are not permitted during the class unless the student

has received prior permission from the instructor. Any sharing, distribution, and or uploading of these recordings outside of the parameters of the class is prohibited. Students with specific recording accommodations approved by the Disability Resource Center should present their official documentation to the instructor.

All content for this course, including handouts, assignments, and lectures are the intellectual property of the instructors and cannot be reproduced or sold without prior permission from the instructors. A student may use the material for reasonable educational and professional purposes extending beyond this class, such as studying for a comprehensive or qualifying examination in a degree program, preparing for a professional or certification examination, or to assist in fulfilling responsibilities at a job or internship.

Tentative Class Schedule

DATE	TOPIC	FORMAT
M Jan 13	Introduction	Syllabus and questionnaire
W Jan 15	No class	
F Jan 17	TOPIC: Escalation	Lecture and Discussion
M Jan 20	Dr. ML King Holiday	
W Jan 22	TOPIC: Escalation	Lecture and Discussion
F Jan 24	No class	
M Jan 27	TOPIC: Escalation	Student Presentations and Reaction Paper
W Jan 29	TOPIC: Craving	Lecture and Discussion
F Jan 31	TOPIC: Craving	Lecture and Discussion
M Feb 3	TOPIC: Craving	Student Presentations and Reaction Paper
W Feb 5	No class	
F Feb 7	TOPIC: Sex Differences	Lecture and Discussion
M Feb 10	TOPIC: Sex Differences	Lecture and Discussion
W Feb 12	TOPIC: Sex Differences	Student Presentations and Reaction Paper
F Feb 14	No class	
M Feb 17	TOPIC: Developmental Issues	Lecture and Discussion
W Feb 19	No class	
F Feb 21	TOPIC: Developmental Issues	Lecture and Discussion
M Feb 24	TOPIC: Developmental Issues	Student Presentations and Reaction Paper
W Feb 26	TOPIC: Social Influences	Lecture and Discussion
F Feb 28	TOPIC: Social Influences	Lecture and Discussion
M Mar 3	TOPIC: Social Influences	Student Presentations and Reaction Paper
W Mar 5	EXAM 1	
F Mar 7	TOPIC: Stress	Lecture and Discussion
M Mar 10	TOPIC: Stress	Lecture and Discussion
W Mar 12	TOPIC: Stress	Student Presentations and Reaction Paper
F Mar 14	No class	
M Mar 17	Spring Break	
W Mar 19	Spring Break	
F Mar 21	Spring Break	
M Mar 24	TOPIC: Brain Mechanisms	Lecture and Discussion
W Mar 26	TOPIC: Brain Mechanisms	Lecture and Discussion
F Mar 28	TOPIC: Brain Mechanisms	Lecture and Discussion
M Mar 31	TOPIC: Brain Mechanisms	Student Presentations and Reaction Paper
W Apr 2	TOPIC: Pharmacotherapies	
F Apr 4	TOPIC: Pharmacotherapies	
M Apr 7	TOPIC: Pharmacotherapies	Student Presentations and Reaction Paper

W Apr 9	TOPIC: Behavioral Therapies	
F Apr 11	No class	
M Apr 14	TOPIC: Behavioral Therapies	
W Apr 16	No class	
F Apr 18	TOPIC: Behavioral Therapies	Student Presentations and Reaction Paper
M Apr 21	TOPIC: Novel Therapies	
W Apr 23	TOPIC: Novel Therapies	
F Apr 25	TOPIC: Novel Therapies	Student Presentations and Reaction Paper
M Apr 28	Prep Day (no class)	Make up missed assignments
W Apr 30	No class	
F May 2	Reading Day (no class)	Make up missed assignments/exams
M May 5	EXAM 2 (8 AM)	