

DRUGS: BRAIN, MIND, AND CULTURE
COGNITIVE SCIENCE 174
Summer 2026 – Barcelona, Spain

MTuWTh 11:00 am-12:30 pm

INSTRUCTOR

Jaime A. Pineda, Ph.D.
Office Hours: TBD or by appointment (858-337-1902)
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COURSE GOALS

This course explores the relationship between drugs, brain, mind, and culture. It will examine phenomena as small and transient as chemical-docking at brain receptors, and as broad and ongoing as drug use through history. In addition to lectures, you will take an active role in discussing the topics presented in the readings, and by forming a group and making a presentation. By the end of the class, you should know:

- bio-, psycho-, and sociological perspectives on drug use and addiction
- neurotransmitter systems that mediate the effects of psychoactive drugs
- the role of personal expectations, cultural context, and cognitive factors in drug effects
- the influence of science, business, politics, and media in the history of drug policy
- profiles on some of the most commonly used and abused drugs

METHODS OF EVALUATION

No work is accepted late unless there is either prior approval of the instructor or documented proof of emergency and contact with the instructor as soon as possible. There are no make-ups or extra credit projects. All quiz grading is done out of a number of total points, and final letter grades are based on your performance compared to the rest of the class (i.e. z-score--the number of standard deviations above or below the mean total score).

Quizzes (5):	50%	Group presentation:	40%	Discussion:	10%
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Quizzes are administered each Thursday, starting Week 1, during the first 15 minutes of class, and cover the lectures and readings for that week. Each quiz consists of a variety of questions (T/F, Fill-in, multiple choice, short answer). You may not refer to the readings or notes during the quiz. If you are late to class, you will have that much less time to complete your quiz.

Group Presentation. Each group will consist of 4 members who will give an oral presentation during Week 5. Students choose their own groups, decide on a course-relevant topic subject to instructor approval, and each member contributes to the presentation. You must earn final approval no later than the end of 2nd week, so assemble a group and determine a topic as soon as possible. This way, you can use feedback to revise your topic and stake a claim so another group doesn't take "your" topic first! Presentations receive a group score, so it is important to work together and, if you have problems with your group members, notify the instructor as soon as possible. More information on projects (e.g. suggested topics, tips for research etc) will be given in class.

Discussion. Participation is expected and, while not graded separately, will be used to help decide final grades in any "borderline" cases.

READINGS

Articles from the popular press and scientific journals will be shared as pdf files from the instructor.

ACADEMIC INTEGRITY

Academic integrity is expected at all times; cheating and/or plagiarism will not be tolerated. You are encouraged to study and confer with your classmates, but quizzes must be completed alone. Cheating and/or plagiarism will result in automatic failure of the course.

	COGS 174 DRUGS: BRAIN, MIND, AND CULTURE	
WEEK 1	Jun2 29 – July 2 Overview; Perspectives on Drug Use/Policy/History (1st Quiz on Thursday)	WEEK 1
WEEK 2	July 6 – July 9 Brain Basics, Pharmacology, Neurotransmitters (2nd Quiz on Thursday)	WEEK 2
WEEK 3	July 13– July 16 Pharmacology, Neurotransmitters, Placebo, and Expectancy Effects (3rd Quiz on Thursday)	WEEK 3
WEEK 4	July 20 – July 23 Models of Addiction, Stimulants, Marijuana (4th Quiz on Thursday) (Summary outlines due – on Thursday)	WEEK 4
WEEK 5	July 27 – July 30 Opiates, Hallucinogens Group Term Paper due – 8/1	WEEK 5

READINGS

Week 1: Perspectives on Drug Use/Policy/History

Lewis, M. (2012). Why addiction is NOT a brain disease. *No longer available online.*

Drugs, Brains, and Behavior: The Science of Addiction: Drugs and the Brain (2024) | NIDA

<https://nida.nih.gov/publications/drugs-brains-behavior-science-addiction/drugs-brain>

Becker, G.S. and Murphy, K.M. (2013). Have we lost the war on drugs?

<http://online.wsj.com/news/articles/SB10001424127887324374004578217682305605070#printMode>

Week 2: Brain Basics, Pharmacology, Neurotransmitters

Singer, B. F. Psychopharmacology: How do drugs work on the brain?

<https://openpress.sussex.ac.uk/introductiontobiologicalpsychology/chapter/40>

Raypole, C (2019). Dopamine and addiction: Separating myths and facts.

<https://www.healthline.com/health/dopamine-addiction>

Staff (2023). What are the roles of neurotransmitters?

<https://lagunatreatment.com/addiction-research/roles-of-neurotransmitters/>

Week 3: Pharmacology, Neurotransmitters, Placebo and Expectancy Effects

Freeman, S. (2013). How the placebo effect works. *No longer available online.*

Madrigal, A.C. (2011). The dark side of the placebo effect: when intense belief kills.

<http://www.theatlantic.com/health/print/2011/09/the-dark-side-of-the-placebo-effect-when-intense-belief-kills/245065/>

Brody, B. (2022). What are nootropics?

<https://www.webmd.com/vitamins-and-supplements/features/nootropics-smart-drugs-overview>

Week 4: Models of Addiction, Stimulants, Marijuana

NPR (2025). Will Trump change federal marijuana policy? Here's what to know.

<https://www.pbs.org/newshour/politics/will-trump-change-federal-marijuana-policy-heres-what-to-know>

Stafford, T. (2013). Drug addiction: the complex truth.

<http://mindhacks.com/2013/09/13/drug-addiction-the-complex-truth/>

[complex-truth/](http://mindhacks.com/2013/09/13/drug-addiction-the-complex-truth/)

McKinley, J. (2024). 7 Deaths, 5 Hours: Drug Overdoses Surge in Western New York. The New York Times.

<https://www.nytimes.com/2024/06/29/nyregion/overdose-deaths-fentanyl-buffalo-erie-county.html>

Week 5: Opiates, Hallucinogens

Glantz, A. (2013). VA pushing pills and getting vets hooked on opiates. *No longer available online*.

World Health Organization (2025) Opioid overdose. <https://www.who.int/news-room/fact-sheets/detail/opioid-overdose>

Chatterjee, R. (2024). As 'magic mushrooms' got more attention, drug busts of the psychedelic drug went up. <https://www.ncbi.nlm.nih.gov/search/research-news/19793/>