

NRSC2270: DRUGS, BRAIN, AND MIND
Fall 2023
TR 10:15-11:44 am Levin Auditorium

Course Personnel:

Lecturer: *Michael J. Kane, Ph.D.*

Email: kanemi@sas.upenn.edu

Office Hours: **Wednesdays 1:30-2:30 pm via Zoom (No office hours on 8/30) or by appointment**

TA: *Gabi Galchen*

Email: ggalchen@sas.upenn.edu

Office Hours: **Fridays 2-3 pm in 104 Leidy (No office hours on 9/1)**

TA: *Jan Magielski*

Email: janmag@sas.upenn.edu

Office Hours: **Mondays, 5-6 pm via Zoom**

TA: *Austin Pothinkamjorn*

Email: apothik@sas.upenn.edu

Office Hours: **Thursdays: 3:30-4:30p via Zoom (No office hours on 8/31)**

Course Description:

This is a survey course in the field of neuropsychopharmacology. The course will begin by focusing on the basics of pharmacology, Research Methods in psychopharmacology, and major neurotransmitter systems. We will then cover the neurobiology of addiction and several major categories of drugs of abuse, with a focus on the mechanisms of action of these drugs. Last, we will cover the pharmacology and pathophysiology of some neuropsychiatric disorders.

BIBB 109 / PSYC 109 / BIOL 109: Introduction to Brain and Behavior is a *pre-requisite* for the course. The course will assume that students have a basic background in neuroscience and neurotransmitter systems.

Textbook:

Meyer, JS & Quenzer, LF. (2018). ***Psychopharmacology: Drugs, the Brain, and Behavior***, 3rd Edition, Sinauer Associates, Inc., Sunderland, MA. ISBN: 978-0-87893-510-9.

Course Web Page:

Announcements, lecture slides, weekly quizzes, additional media, and other important course information will be posted on CANVAS. Please monitor this website regularly.

Lectures:

This course will be taught in a **lecture-based** format. If you have any questions or if there is something that you do not understand in class, please speak up! It is likely that many of your classmates do not understand it either. Lectures will be recorded via Zoom and automatically uploaded to the course Canvas Site. *Nobody* will be permitted to watch live lectures via Zoom.

If you want to do well in the class, it is best to **attend** the lectures. Lecture slides will be posted on CANVAS before the lecture. You are forewarned that the slides are only **part** of the lecture and **may not**

convey information that was presented orally. Neither the posted slides nor the textbook provides an adequate substitute for attending class. Exam questions will only come from material covered in the lectures!

Readings:

You should read the assigned chapters of the textbook **prior to** class. At certain points in the course, the lectures will coincide closely with the textbook, while at other points the lecture may diverge from the text. In the case of divergence, you should consider the lecture as primary material and the textbook as supporting material.

Quizzes:

There is a total of **9** take-at-home quizzes during the semester. Each quiz will consist of 5 multiple choice questions (based on the material covered in the lectures during the week), and you will have 5 minutes to complete them. You may use your notes, textbook, etc... during the quiz. The quizzes will be posted on Canvas on by Thursday at midnight and are to be completed by the following Tuesday at 10:14 am. You must complete the quiz **on time** to receive credit. **Your final quiz score will be based on your top 8 scores.** **There are no make-up or late quizzes.**

Attendance and Participation (via Poll Everywhere)

During lectures (beginning 9/12), I will be administering 3-4 poll questions (these are old exam questions that cover material presented in slides). The polls will not be graded for correctness, but you must complete each poll to get attendance and participation credit for the day. You are allowed to miss polls from up to **three class periods** during the semester. After three absences, points will be deducted from your Attendance and Participation Grade for each missed class. **There are no make-up or late polls.** See below for instructions on registering with Poll Everywhere.

Grades:

Your grade will be a product of your performance on three, non-cumulative exams (worth a total of 80% of your final grade), 8 take-at-home quizzes (worth a total of 10%), and Attendance Polls (worth a total of 10%). All exams consist of multiple choice/fill-in-the-blank/matching questions (covering factual material and to test critical thinking) and free-response questions (to test critical thinking).

Chapter Discussion Boards

We will create a Discussion Board for each Chapter that we cover. You are encouraged to post questions to these boards. The TAs will monitor them regularly and respond in a timely manner.

Exam Make-Up Policy:

Make-up exams will be scheduled on a case-by-case basis. Please look at the dates for the three mid-term exams **now**. If any exam conflicts with a religious holiday that you observe or with a University sanctioned event, please let me know via e-mail by the **end of the second week of the course.**

Re-grading Policy (Testivus):

In the spirit of the most famous made-up holiday (Festivus), you will have the opportunity to air your grievances with any exam question that you felt was unfair. As part of Testivus, you must submit your grievance to me *in writing* to have your work re-evaluated, **no more than one week after the work is returned in class.** No re-grade requests will be considered beyond this date. Your request must explain the specific error or fallacy that you think was made. If you submit a request, **your work will be re-graded in its entirety,** and the final grade could be higher or lower than your original grade. Please only submit a Testivus request if you genuinely believe that a question was unfair or an error has been made.

Review Sessions:

Prior to each exam, the TAs will run review sessions outside of class. Be sure to email them specific questions and/or topics to cover during these sessions.

Office Hours/Email Policy:

The instructor and TAs will have office hours every week; you are encouraged to attend office hours if you have any questions about the content or structure of the course. Please only e-mail the instructor or TAs if you have a question that can be answered in a few sentences or less. If you have a question that requires a longer response, please come to one of our office hours. Please allow 24 hours for a response to your e-mail (48 hours on weekends).

Academic Integrity:

Please note that Penn has strict rules on academic integrity (see:

<https://catalog.upenn.edu/pennbook/code-of-academic-integrity/>)

Violations of the rules will be reported to the Office of Student Conduct and will likely result in automatic failure of the course.

Course Action Notices

Course Support Notices (formerly Course Problem Notices) are messages from the instructor to a student about steps the student should take to succeed in a course. Course Absence Notices (formerly Course Absence Reports) are messages from a student to instructor or instructors about missing a class meeting. In both types of notices, the student's advising office is copied to enable academic support to be mobilized. The submission of a CAN does not excuse you from your course obligations; students are still responsible for following up with each instructor directly and adhering to course policies and procedures as outlined in the course syllabus. All students enrolled in a class can submit a CAN during the current term from a link in [Path@Penn](#). Those links will be made active as soon as Course Action Notices is available.

All notifications of class absences ***must be sent to the instructor through the CAN link only.***

If you will be absent for more than five days as a result of a University-approved excuse, please contact a CaseNet advisor with the College Office, who will notify your instructors directly.

Classroom Etiquette:

Although you are encouraged to come to lectures, you are not required to do so; however, this will likely be reflected in your grades. Laptop computers should be used only for taking notes, not for sending instant messages, surfing the web, monitoring status updates on Facebook, or any other purpose.

Copyright and Reproduction of Course Material

I do not give permission to reproduce or share the course content, including the lecture or discussion materials, in any form. This includes (but is not limited to) distributing or posting of lecture material or recordings, notes, or exam questions on the internet. If you wish to share content from my lectures or discussions, you must first obtain written permission from me.

Registering with Poll Everywhere

1) Create a Poll Everywhere Account: Go to: <https://id.polleverywhere.com/login>. Enter your UPenn email address in the format: PennKey@upenn.edu and click "Login with University of Pennsylvania" then enter your PennKey and password on the Weblogin screen.

2) Confirm that your UPenn email address is associated with your Canvas account. It can be in the format PennKey@upenn.edu or PennKey@school.upenn.edu and does not need to be your default address.

In Canvas go to Account > Settings > Ways to Contact

If you do not see your UPenn email address listed here, use these instructions to add it as an additional email address: <https://community.canvaslms.com/t5/Student-Guide/How-do-I-add-an-additional-email-address-as-a-contact-method-in/ta-p/412>

Order of Topics

1. Course introduction and overview
 2. Chapter 1: Principles of Pharmacology
 3. Chapter 4: Research Methods in Pharmacology
 4. Chapter 5: Catecholamines
 5. **Documentary: “The Case of the Frozen Addict”**
 6. Chapter 6: Serotonin
 7. Chapter 7: Acetylcholine
 8. Chapter 8: Glutamate and GABA
 9. Chapter 9: Neurobiology of Addiction (Additional required material: Addiction and *RadioLab* soundbite)
 10. Chapter 10: Alcohol
 11. Chapter 11: Opioids (Additional required material: *The Crime of the Century*)
 12. Chapter 12: Psychomotor Stimulants
 13. Chapter 13: Nicotine and Caffeine (Additional required material: *I Can’t Quit You* soundbite)
 14. Chapter 14: Marijuana and Cannabinoids
 15. Chapter 15: Hallucinogens and Dissociative Anesthetics
 16. **Documentary: “The Business of Recovery”**
 17. *Chapter 17: Anxiolytic Drugs and Anxiety Disorders
 18. *Chapter 18: Antidepressants and Affective Disorders
 19. *Chapter 19: Antipsychotics and Schizophrenia
- *: Time permitting**

Quiz Due Dates:

Quiz 1: 9/12

Quiz 2: 9/19

Quiz 3: 9/26

Quiz 4: 10/17

Quiz 5: 10/24

Quiz 6: 10/31

Quiz 7: 11/14

Quiz 8: 11/21

Quiz 9: 11/28

Exam Dates:

Exam 1: 9/28

Exam 2: 11/2

Exam 3: 12/7

Important Dates to Note:

Drop Period Ends: 10/9

Grade Type Change Deadline: 10/27

Last Day to Withdraw from a Course: 11/6

Exam Review Sessions

Exam 1:

Exam 2:

Exam 3: