

BIBB 270 DRUGS, BRAIN, AND MIND
SPRING 2014; Monday & Wednesday 2-3:20pm
ANNENBERG 110

Course Personnel and Contact Information:

Faculty: Hayley Nelson, Ph.D.

Biological Basis of Behavior Program
Office: B-28, Solomon Psychology Lab Building
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Office Hours: Wednesdays 11AM-12PM

Teaching Assistant: Nicole Yohn

Graduate Student
Email: nyohn@mail.med.upenn.edu
Office Hours: Mondays 12:45-1:45 PM
in Solomon D-23

Teaching Assistant: Ken Bisson

Undergraduate Student
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Office Hours: Wednesdays 4-5 PM
in Solomon D-23

Course Description:

The course will begin with an introduction of basic concepts in pharmacology, pharmacokinetics and pharmacodynamics. This introduction will include a discussion of basic concepts in pharmacology including but not limited to the following: dose response curve analysis, agonist-antagonist testing, drug metabolism, tolerance and sensitization. In addition, the early part of the course will include overviews of various psychopharmacological and neuropharmacological research techniques. The remainder of the course will investigate drugs of abuse and pharmacological treatments for various diseases including addiction, depression, anxiety disorders and schizophrenia.

BIBB 109 / PSYC 109 / BIOL 109: Introduction to Brain and Behavior is a **pre-requisite** for the course. With this in mind, we will only briefly review fundamental neuroscience material such as receptor function and neurotransmission that are essential to understanding the neuropsychopharmacological research that is the primary focus of the present course. The course will assume that students have a basic background in neuroscience and neurotransmitter systems.

Text:

Meyer, JS & Quenzer, LF. (2013). Psychopharmacology: Drugs, the Brain, and Behavior, 2nd Edition, Sinauer Associates, Inc., Sunderland, MA. ISBN: 978-0-87893-510-9.

sites.sinauer.com/psychopharm2e

Course Web Page:

Lectures, discussions, additional readings, and other important course information will be posted routinely on **CANVAS**. Please monitor this website regularly.

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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, speak up! It is likely that many of your classmates do not understand it either.

If you want to do well in the class, it is best to attend the lectures. Lecture slides will be posted online before the lecture. You are welcome to print these out prior to the lecture to aid in your note-taking. However, be 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 provide an adequate substitute for note-taking in class.

Readings: You should read the assigned portions of the textbook prior to class. At certain points in the course, the lectures will coincide closely to the textbook, while at other points the lecture will diverge from the text. In case of divergence, you should consider the lecture as primary material and the textbook as supporting material. Although you may be tested on *details* that were in the textbook but not the lecture, you will only be tested on *topics* covered in the lecture. If there is an exception to this rule, it will be pointed out explicitly in class.

In-Class Assignments: There will be three in-class assignments where you will work in teams of 5-6 students. The dates of the assignments are indicated on the syllabus and everyone is required to participate on these days. Be sure to bring your textbook and class notes on these days. At least one person in the group needs to bring a laptop with access to the internet. One document per group will be turned in at the end of class.

Literature Review: You are required to write one APA Style Literature Review for this course. It is to be no more than 10 pages in length, following APA style formatting. You must cite at least 3 original research articles. Details on how to write this paper will be discussed in class and posted on Canvas. The deadline to upload your review on Canvas is **5pm on 4/14**. There will be checkpoints of your progress throughout the semester. DO NOT wait until the last minute to work on this!

Exams: Your grade will be a product of your performance on three exams. All exams consist of multiple choice, matching, and true/false questions. **The exams are rolling cumulative, so that concepts presented in each block are fair game for questions asked in succeeding exams. We will offer one make-up exam at the end of the course** – it will cover everything taught in the course and will substitute for one absence for any exam. Your total exam grade will be based on the average of your three highest exam scores, each being 20% of your final grade. If you take all three midterms, you do not need to take the make-up exam, however you may choose to take it if you would like to try to adjust your final grade by dropping the lowest score.

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Make-Up Policy: The only make-up exam offered is the cumulative exam during Finals. If you miss one midterm, your exam grade for the course will be based on the average score of the other midterms and the make-up exam. **You will not be given a make-up exam other than the scheduled make-up exam on 5/5.**

Re-grading Policy: If you have a question or concern that there was an error in grading an exam, assignment, or report, you must submit your request to the teaching assistant *in writing* to have your work re-graded, no more than one week after the work was returned in class. **No re-grade requests will be considered beyond this date.** Your request must explain the specific error 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 re-grade request if you genuinely believe that an error has been made--a judgment call that could have gone either way is not an error.

Review Sessions: Nicole and Ken will run review sessions before each exam. Be sure to email them specific questions and/or topics to cover during the reviews.

Office Hours/Email Policy: The instructor and the teaching assistants will have office hours every week, which you are encouraged to attend if you have any questions about the content or structure of the course. Please only e-mail the instructor 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.

Academic Integrity: Please note that Penn has strict rules on academic integrity (see www.upenn.edu/academicintegrity). Violations of the rules will be reported to the Office of Student Conduct and will likely result in automatic failure of the course.

Course Absence Report: The Course Absence Report (CAR) system has been designed to provide a consistent way for students to notify course instructors of short-term absences for one or more courses. It also provides a method for advising offices to track absences and coordinate support for students who miss classes. The submission of a CAR 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 CAR during the current term using Penn InTouch. All notifications of class absences must be sent to the instructor through the CAR *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.

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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. Cell phones/Smartphones should be turned off during class. Laptop computers should be used **only** for taking notes and completing in class assignments, not for sending instant messages, surfing the web, monitoring status updates on Facebook, or any other purpose. Violation of this policy will result in penalization by lowering of your final class grade.

Final Grade:

Your final grade will be based on the exams, literature review, and in class assignments as follows:

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| Exams | 60% |
| Literature Review | 25% |
| In-Class Assignments (three assignments) | 15% |

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| Date | Topic | Readings | Assign. Due |
|--------------------|---|------------------------|-----------------------------------|
| 1/15 | Course introduction and overview | | |
| 1/22 | Principles of Pharmacology | Ch. 1 | |
| 1/27 | Principles of Pharmacology <i>continued</i> , Research Methods | Ch. 1 & 4 | |
| 1/29 | Research Methods <i>continued</i> | Ch. 4 | |
| 2/3 | Catecholamines, Serotonin | Ch. 5 & 6 | |
| 2/5 | Acetylcholine, Glutamate and GABA | Ch. 7 & 8 | |
| 2/10 | APA Style Literature Reviews | | |
| 2/12 | Review | | |
| 2/17 | Midterm 1 | | |
| 2/19 | Alcohol, Nicotine | Ch. 10, pp. 374-393 | |
| 2/24 | In-Class Assignment 1 | | Assign. 1 |
| 2/26 | Opioids | Ch. 11 | |
| 3/3 | Stimulants | Ch. 12 | |
| 3/5 | Guest Lecturer – Chris Pierce, PhD | | Topic |
| 3/17 | Marijuana and Cannabinoids | Ch. 14 | |
| 3/19 | Hallucinogens, PCP, Ketamine, Steroids | Ch. 15, pp. 464-474 | |
| 3/24 | In-Class Assignment 2 | | Assign. 2 & Thesis |
| 3/26 | Review | | |
| 3/31 | Midterm 2 | | |
| 4/2 | Affective and Anxiety Disorders | Ch. 18 & 19 | |
| 4/7 | Schizophrenia | Ch. 20 | |
| 4/9 | Drug Abuse and Addiction | Ch. 9 | |
| 4/14 | Guest Lecturer– Teri Franklin, PhD | | Lit. Review |
| 4/16 | Guest Lecturer– Cory Newman, PhD, ABPP | | |
| 4/21 | “The Frozen Addicts” | pp. 612-619 | |
| 4/23 | In-Class Assignment 3 | | Assign. 3 |
| 4/28 | Review | | |
| 4/30 | Midterm 3 | | |
| 5/5: 9-11AM | Cumulative Make-up Exam | | |

Dates to note:

Jan. 20 – MLK Day

Feb. 21 – Drop period ends

Mar. 8-16 – Spring Break

Apr. 4 – Withdrawal deadline

May 5 – Make-up Exam

9-11am