

DRUGS AND THE BRAIN
PSYC62
(Fri 10 am-12 pm; Rm. AA 112)

Instructor: Prof Suzanne Erb
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Office hours: Tues 1:00-3:00 pm
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Teaching Assistants: Kaja Jasinska; Paul Klas; David Nguyen

Course description

Psychopharmacology is the study of the effects of drugs on behaviour, cognition, and emotion. There are many different classes of drugs that act within the central nervous system to alter behaviour, cognition and emotion. Some have been designed for the treatment of mental disorders such as schizophrenia and depression. Other drugs are known primarily for their social or recreational abuse potential. This course will provide an introduction to basic principles of psychopharmacology, with a specific focus on drugs of abuse.

A range of topics pertinent to the study of psychopharmacology will be covered, including behavioural pharmacology and pharmacokinetics, neurobiological mechanisms of drug action, tolerance and dependence, and classification of psychotropic drugs. In addition, several of the major classes of drugs of abuse will be studied and recent research on the behavioural and neurobiological effects of these drugs will be examined.

Textbook

David M. Grilly and John D. Salamone (2012) *Drugs, Brain, and Behavior, Sixth Edition*. Boston, MA: Allyn & Bacon.

Course Website

Course-related information including lecture notes and assigned readings will be provided on the intranet.

Course Components and Evaluation

- Evaluation will be based on a writing assignment (20% of final grade), midterm exam (35% of final grade), and final (45% of final grade) exam.
- The exams will be multiple choice in format and will cover all lecture and textbook material (unless otherwise specified).
- The final exam will be cumulative.
- Information on the writing assignment is included below.

There will be no make-up for the mid-term exam. Students who miss the exam due to illness must submit a medical note to Prof Erb within 24 h of the exam. For these students only, the cumulative final exam will form 75% of the final grade and the writing assignment will form 25% of the final grade.

Writing Assignment

For this assignment, you will be required to identify one specific drug or class of drugs that you believe exemplifies how drugs of addiction can be viewed as “two-edge swords”. You may choose to support your argument by comparing your drug or drug class of choice to other drugs that might also be considered as “two-edge swords”. You will be required to support your argument with specific reference to the published literature (a reformulation and elaboration of ideas presented in lecture will not be sufficient). Your essays must be 4-5 double-spaced pages in length, and contain citations for at least 6 papers from either the primary or secondary literature. You will be graded on the organization and strength of your argument, and overall quality of your writing. In addition, you will be required to include all citations in a reference list at the end of your paper, and to format your citations and reference list in APA style. More information on what should comprise the structure and content of the essays will be forthcoming.

You may work in groups of 2-3, and submit one paper for your group; or you may work on your own. If you decide to work in a group, you must provide Prof Erb with the names of your group members by Feb 8 at the latest. If you have not formed a group by Feb 8 you must submit your own work; if you elect to work in a group, you must submit your work as a group (i.e., you may not change your mind and complete the essay on your own).

Papers must be submitted in hard copy and to “Turnitin” by 4:30 pm April 5.

SCHEDULE OF LECTURES

DATE	TOPICS	READINGS
Class 1: Jan 11	<ul style="list-style-type: none"> • Introduction to course • Psychopharmacology in Perspective • Drug Classification 	<ul style="list-style-type: none"> • Ch 1-2
Class 2: Jan 18	<ul style="list-style-type: none"> • Principles of Pharmacology 	<ul style="list-style-type: none"> • Ch 3
Class 3: Jan 25	<ul style="list-style-type: none"> • Neuronal transmission and conduction 	<ul style="list-style-type: none"> • Ch 4 and 5
Class 4: Feb 2	<ul style="list-style-type: none"> • Tolerance, sensitization, dependence and addiction 	<ul style="list-style-type: none"> • Ch 6
Class 5: Feb 8	<ul style="list-style-type: none"> • DVD: "Addiction" 	
Class 6: Feb 15	<ul style="list-style-type: none"> • Drug Policy and Laws 	<ul style="list-style-type: none"> • "Addiction" series: TheLancet.com (readings will be posted)
Feb 22	READING WEEK	
Class 7: Mar 1	MIDTERM EXAM	Classes 1-5
Class 8: Mar 8	<ul style="list-style-type: none"> • Psychomotor stimulants 	<ul style="list-style-type: none"> • Ch 7
Class 9: Mar 15	<ul style="list-style-type: none"> • Sedative hypnotics and anxiolytics 	<ul style="list-style-type: none"> • Ch 10
Class 10: Mar 22	<ul style="list-style-type: none"> • Opiates 	<ul style="list-style-type: none"> • Ch 12
Class 11: Apr 5	<ul style="list-style-type: none"> • Dissociative anesthetics, psychedelics, and hallucinogens 	<ul style="list-style-type: none"> • Ch 13
Class 12: Apr 8	<ul style="list-style-type: none"> • Course Wrap-up 	

