



CAMOSUN COLLEGE
School of Arts & Science
Department of Psychology

PSYC-245-001
Drugs & Behaviour
Fall 2019

COURSE OUTLINE

The course description is available on the web @ <http://camosun.ca/learn/calendar/current/web/psyc.html>

Ω Please note: This outline will not be kept indefinitely. It is recommended students keep this outline for their records, especially to assist in transfer credit to post-secondary institutions.

1. Instructor Information

(a) Instructor	Michael Pollock
(b) Office hours	Mondays 11:30-12:20, Tuesdays, 12:30-1:20, Wednesdays 11:30-12:20, Thursdays 12:30-12:50, Fridays 12:30-1:20
(c) Location	Fisher 308B
(d) Phone	250-370-3111 Alternative: _____
(e) E-mail	pollockm@camosun.ca
(f) Website	http://online.camosun.ca

2. Intended Learning Outcomes

Upon completion of this course a student will be able to:

1. The historical uses of psychoactive drugs worldwide and the history of drug laws from an international perspective.
2. Current Canadian, European and American drug laws.
3. The research base of the current debate on drug use, with a focus on the LeDane Commission, and current Senate and House illegal drug uses committee findings.
4. Various models of the cause of drug use and addiction with particular reference to the Reward System model of drug addiction.
5. The basic principles of pharmacology and neuropharmacology with regard to psychoactive substances.
6. The basic biochemical processes in the effects of psychoactive chemicals on the neuron and CNS systems.
7. The basic mechanisms of neuronal functioning that are affected by the introduction of psychoactive substances into the CNS.
8. Psychological effects of various drugs.
9. The basic principles of ethnopharmacology.
10. The mode of action, etiological models, side effects and patterns of use with regard to the major drugs used to treat mood disorders, anxiety disorders, schizophrenia, and selected other mental disorders.
11. The basic mechanisms of action, short and long term effects of alcohol, caffeine, marijuana, hallucinatory drugs, nicotine, and other selected drugs.
12. The basic methods of drug abuse treatment in use today.
13. The basic methods of drug education used in various parts of the world.

3. Required Materials

Hancock, S.D. & McKim, W.A. (2018). *Drugs and Behavior: An Introduction to Behavioral Pharmacology*. (8th ed.). Toronto: Pearson.

4. Course Content and Schedule

Course Content:

This introductory course will review the major psychoactive (“mind-altering”) drugs, their effects, and their possible underlying mechanisms of action, as reported in the scientific literature. In particular, we will study a sort of alchemy of the mind – how drugs are able to turn lesser mental states into golden ones (a psychological version of the “philosopher’s stone”), and the limitations/side-effects of our current drugs. The first half of the course will examine the fundamentals of psychopharmacology: drug classifications and names, pharmacokinetics, pharmacodynamics, analysis of drug effects (both physiological and psychological), consequences of long-term drug use (tolerance/sensitization and harmful side-effects), and the causes/treatments of drug addiction. The remainder of the course will then apply these fundamentals to, as well as explore the history of, the major classes of psychoactive drugs: depressants (e.g., alcohol, anti-anxiety & sleeping pills), stimulants (e.g., cocaine, amphetamines, caffeine, chocolate, nicotine), opioids (e.g., pain killers, some cough medicine, heroin), antipsychotic and antidepressant medication, cannabinoids (e.g., marijuana), hallucinogens (e.g., LSD, magic mushrooms, peyote, ecstasy), and dissociative anesthetics (e.g., PCP, ketamine). In addition to studying the concepts associated with these topics, students will have the option of engaging in their own independent research as part of their course assignments. This course is a must for anyone interested in understanding the effects of drugs on our minds and the first-hand experience you will gain in conducting psychopharmacology research will allow you to be better able to critically evaluate research claims for their practical usefulness in your personal and professional life.

Deadlines:

The Course Schedule below lists the dates for when the different components of your course grade are due. There are no make-up exams/assignments for this course. Failing to complete an exam/assignment by its scheduled date will result in a score of zero for that exam/assignment. Exceptions may be granted at the discretion of the instructor for cases of hardship or extenuating circumstances (e.g., a medical emergency) if the proper documentation to show this can be provided.

COURSE SCHEDULE

Week	Lab or Lecture	Date	Lecture Topic	Research Stage	Readings*, Exam, or Assignment due
Week 1					
	Lab	Sep 4 Wednesday		Research Question & Rationale	
Week 2		Sep 8 Sunday			Read Ch.1
	Lecture	Sep 9 Monday	Drugs & Pharmacokinetics		
	Lab	Sep 11 Wednesday		Literature Search	
Week 3		Sep 15 Sunday			Read pg. 63-67 & 79-90
	Lecture	Sep 16 Monday	Pharmacodynamics		

	Lab	Sep 18 Wednesday		Article Summaries	
Week 4		Sep 22 Sunday			Read pg. 67-78
	Lecture	Sep 23 Monday	Nervous System		
	Lab	Sep 25 Wednesday		Hypotheses	
Week 5		Sep 29 Sunday			Read Ch. 2 & 3
	Lecture	Sep 30 Monday	Behavioral Analysis & Adaptation		
	Lab	Oct 2 Wednesday		Correlational Methods	
Week 6		Oct 6 Sunday			Read Ch.5
	Lecture	Oct 7 Monday	Addiction & Treatments		
	Lab	Oct 9 Wednesday		Correlational Results	
Week 7		Oct 13 Sunday			
	Lecture	Oct 14 Monday	<i>Thanksgiving Day – College Closed</i>		
	Lab	Oct 16 Wednesday		Correlational Table & Figure	
Week 8		Oct 20 Sunday			
	Lecture	Oct 21 Monday	Review for Midterm		
	Lab	Oct 23 Wednesday		Experimental Methods	Midterm Exam

Week 9		Oct 27 Sunday			Read Ch.6&7
	Lecture	Oct 28 Monday	Depressants		
	Lab	Oct 30 Wednesday		Experimental Results	
Week 10		Nov 3 Sunday			Read Ch.8,9,&10
	Lecture	Nov 4 Monday	Stimulants		
	Lab	Nov 6 Wednesday		Experimental Table & Figure	
Week 11		Nov 10 Sunday			Read Ch.11
	Lecture	Nov 11 Monday	<i>Remembrance Day – College Closed</i>		
	Lab	Nov 13 Wednesday		Discussion	
Week 12		Nov 17 Sunday			Read Ch.12&13
	Lecture	Nov 18 Monday	Opioids		
	Lab	Nov 20 Wednesday		Research Paper	
Week 13		Nov 24 Sunday			Read Ch.14&15
	Lecture	Nov 25 Monday	Antipsychotics & Antidepressants		
	Lab	Nov 27 Wednesday			
Week 14		Dec 1 Sunday			

	Lecture	Dec 2 Monday	Cannabinoids & Hallucinogens		
	Lab	Dec 4 Wednesday			<i>Research Project or Alternative Assignment</i>
		TBA			Final Exam

* All assigned readings are taken from the course textbook

5. Basis of Student Assessment (Weighting)

Evaluation:

Your course grade will be based on a weighted average of the percentage points you achieve across the following course components:

Course Component	Weight
Midterm Exam	33%
Final Exam	34%
Assignment	33%
Bonus Questions	Maximum 6% extra credit

Each of these components is described in more detail in the sections below. You can check the course D2L website at any time during the semester for your current class standing and you are invited to discuss any concerns about your grade with the instructor.

Final grades that end with a decimal point of 0.5 or above will be rounded to the next higher whole number, and grades that end with a decimal point below 0.5 will be rounded to the next lower whole number. The grades of the entire class may be scaled up or down at the discretion of the instructor or department. Grades are not official until they appear on a student's academic record.

Exams:

Exams will be in-class, closed book, and not cumulative (i.e., the final exam will only cover material that came after the midterm exam). Exams will cover solely the concepts from the assigned readings listed in the concept lecture notes. Questions will describe points about the concepts and ask for the correct names of those concepts. The format of the questions will be similar to a matching style, in that each question will have a list of all the concept names from the relevant lecture(s) and you must choose one of those concept names as the answer. Half of the questions will be *knowledge*-type questions which use for descriptions of the concepts the same wording as the points in the concept lectures notes, while the other half of questions will be *understanding*-type questions which reword these points usually in the form of a real-life scenario.

Assignments:

Research Project

For this assignment, you will develop in stages throughout the semester a psychopharmacological research project involving a longitudinal study of yourself. Instructions, templates, and examples of each stage will be given by the instructor in class and then you will perform the project outside of class time, with additional help available during office hours.

Stage #1. *Research Question & Rationale* – You will identify a legal recreational drug that you already regularly use and that you have a question/problem/goal about which you wish to have answered/solved/achieved, such as about its effects on you or about your thoughts/feelings/behavior towards it. (IMPORTANT NOTE: make sure to choose a question you are comfortable sharing with the rest of the class the results you will collect on yourself about it.) In your lab, you will then find fellow students interested in a similar topic as yourself and form a group with them to work with on this project. You will list the reasons why your group members are personally interested in this topic and agree upon on a single phrasing of the research question that is broad enough to apply to each of them.

Stage #2. *Literature Search* – You will perform a literature search to see what possible answers to your research question have already been identified by psychopharmacological research. You will

then track down primary research articles that provide evidence for each of these claims, with each member of your group contributing different primary research articles.

Stage #3. *Article Summaries* – For each of the primary research articles that you personally contributed to your group, you will summarize *in your own words* both what that article did (based on its Methods section) and what it found (based on its Results section) that is of relevance to your research question. You will also provide supporting quotes, citations, and references in APA format to back up your summaries of these articles.

Stage #4. *Hypotheses* – For each of the possible answers that your group discovered in their literature search, your group will generate hypotheses that each make testable predictions about the direction of the relationship between the two main variables (the predictor variable and the outcome variable) in that claim.

Stage #5. *Correlational Methods* – For each of the variables in your group's hypotheses, you will describe in detail how your group plans to quantitatively measure natural variations in that variable over time (i.e., longitudinally) within each of your group's members. The methods your group chooses for measuring the variables can be based on those previously used in the scientific literature (i.e., your group's primary research articles) or can be entirely of your own creation.

Stage #6. *Correlational Results* - Following the instructor's approval of your group's proposed correlational methods, you will start carrying out those methods. (IMPORTANT NOTE: findings from a project whose methods have not been approved will receive a mark of zero. Do not start data collection until you have first received written approval of your methods.) Based on the data collected on just yourself, you will then perform correlational analyses to test each of your group's hypotheses. In order to verify the time course of your measurements, on each day of your correlational study you must submit to D2L's Assignments tool all of the data you have collected on yourself up to that point and an update of your correlational analyses.

Stage #7. *Correlational Table & Figure* – You will construct a table displaying for each of your group's hypotheses the correlation coefficients from each of your group's members and from their pooled (raw and standardized) data, as well as reporting the statistical significance of each correlation coefficient. The hypothesis that from the pooled data has the highest correlation coefficient in the direction originally predicted will be judged to have received the strongest support from your group's correlational study. You will also produce a properly labelled scatterplot that visually represents the relationship your group found between the two variables in this hypothesis.

Stage #8. *Experimental Methods* – For the hypothesis that received the strongest support from your group's correlational study, you will describe in detail how your group plans to further experimentally test on themselves whether a causal relationship exists between the two variables (now called the independent variable and the dependent variable) in that hypothesis. The methods your group chooses for manipulating the independent variable and for measuring the dependent variable can be based on those previously used in the scientific literature (i.e., your group's primary research articles) or can be entirely of your own creation. You will also describe how your group proposes to reduce the possibility of confounding variables (i.e., order effects, placebo effects, and experimenter expectancy effects).

Stage #9. *Experimental Results* – Following the instructor's approval of your group's proposed experimental methods, you will start carrying out those methods. (IMPORTANT NOTE: findings from a project whose methods have not been approved will receive a mark of zero. Do not start data collection until you have first received written approval of your methods.) Based on the data collected on just yourself, you will then calculate descriptive statistics (means and standard deviations) for each of your experimental and control conditions, and perform inferential statistics (*t*-test) to determine if there was a statistically significant difference between them as predicted by the hypothesis for your experiment. In order to verify the time course of your measurements, on each day of your experimental study you must submit to D2L's Assignments tool all of the data you have collected on yourself up to that point and an update of your descriptive and inferential statistics.

Stage #10. *Experimental Table & Figure* – You will construct a table displaying for each of your experimental and control conditions the descriptive statistics from each of your group's members and from their pooled (raw and standardized) data, as well as reporting their statistical significance. You will also produce a properly labelled bar graph that visually represents the difference in means between conditions.

Stage #11. *Discussion* – Based on your group's correlational study, you will state which of your group's hypotheses were originally confirmed and, based on your group's experimental study, whether a causal relationship exists between the two variables in the hypothesis that received the strongest support. (IMPORTANT NOTE: Your assignment mark is not dependent on whether your

hypotheses were confirmed or not, but rather whether you have correctly interpreted this based solely on the data your group collected.) You will then relate these findings to the possible answers your group encountered in the literature search and compare your group's results to those of the past studies your group summarized from the primary research articles. You should discuss any discrepancies in the results of such studies and speculate upon their possible reasons due to methodological differences. Finally, based on your group's studies, you will make conclusions about the best answer(s) to your research question, and reflect on the implications and practical applications of these findings.

Stage #12. Research Paper – You will collaborate with your group to co-author in proper APA-style format a report of your group's research project that encompasses all of the work accomplished in each of the above stages. The research paper will include in it each of the following sections: Title Page, Abstract, Introduction, Methods (with separate Correlational Study and Experimental Study subsections), Results (with separate Correlational Study and Experimental Study subsections), Discussion, References, Tables, and Figures.

Alternative Assignment

As an alternative to performing research on yourself, you may complete a critical literature review of various research claims made by the course textbook. This assignment entails signing up (on a first-come, first-served basis) to study, for each of the assigned chapters, one finding which the textbook provides a reference for from the scientific research. After the instructor has given you written approval to analyze a finding, you will read the source referenced by the textbook for that finding and, if it is only a review article/book, further track down the primary research article in which the original study was first reported that provided the evidence for this claim. You will then summarize *in your own words* both what that primary research article did (based on its Methods section) and what it found (based on its Results section) that is of relevance to the finding you were approved to investigate. You will also provide supporting quotes, citations, and references in APA format to back up your summaries of these articles. Finally, you will numerically analyze the effect size of each finding based on the primary articles, with instructions, templates, and examples on how to do this given by the instructor.

Participation & Bonus Questions:

In order to enhance your learning of the course material, to increase your knowledge of psychological research, and to improve the teaching of this course, you will be offered extra credit for participating in the testing of experimental teaching methods applied to this course. To assess the effectiveness of the teaching methods, in each class you will fill out anonymous surveys (subjective measures) and answer bonus questions (objective measures). In addition to providing an opportunity for general feedback on the course, the surveys will specifically measure (at the beginning of class) your expectations about and (at the end of class) your actual experiences with that day's teaching method in terms of the following three factors.

1. Enjoyment: how much you enjoyed the teaching method
2. Knowledge/understanding: how much the teaching method helped improve your knowledge/understanding of that day's course material
3. Motivation: how much the teaching method motivated you to want to study more about that day's topic.

In each class, bonus questions will be given to assess (at the beginning of class) your baseline levels of and (at the end of class) your improvement in knowledge/understanding about that day's course material. The format of the bonus questions will be the same as that used for the exam questions (see the Exams section above), with half of the questions being knowledge-type questions and the other half being understanding-type questions. Each bonus question correctly answered will be worth 0.01% extra on your final course grade, with a maximum extra credit of 6% in total possible (i.e., the equivalent of a letter grade). In order to be eligible to receive credit for answering bonus questions in a given class, you will need to fully participate in class activities for the entire duration of that class.

6. Grading System

Standard Grading System (GPA)

Competency Based Grading System

7. Recommended Materials to Assist Students to Succeed Throughout the Course

8. College Supports, Services and Policies



Immediate, Urgent, or Emergency Support

If you or someone you know requires immediate, urgent, or emergency support (e.g. illness, injury, thoughts of suicide, sexual assault, etc.), **SEEK HELP**. Resource contacts @ <http://camosun.ca/about/mental-health/emergency.html> or <http://camosun.ca/services/sexual-violence/get-support.html#urgent>

College Services

Camosun offers a variety of health and academic support services, including counselling, dental, disability resource centre, help centre, learning skills, sexual violence support & education, library, and writing centre. For more information on each of these services, visit the **STUDENT SERVICES** link on the College website at <http://camosun.ca/>

College Policies

Camosun strives to provide clear, transparent, and easily accessible policies that exemplify the college's commitment to life-changing learning. It is the student's responsibility to become familiar with the content of College policies. Policies are available on the College website at <http://camosun.ca/about/policies/>. Education and academic policies include, but are not limited to, Academic Progress, Admission, Course Withdrawals, Standards for Awarding Credentials, Involuntary Health and Safety Leave of Absence, Prior Learning Assessment, Medical/Compassionate Withdrawal, Sexual Violence and Misconduct, Student Ancillary Fees, Student Appeals, Student Conduct, and Student Penalties and Fines.

A. GRADING SYSTEMS <http://camosun.ca/about/policies/index.html>

The following two grading systems are used at Camosun College:

1. Standard Grading System (GPA)

Percentage	Grade	Description	Grade Point Equivalency
90-100	A+		9
85-89	A		8
80-84	A-		7
77-79	B+		6
73-76	B		5
70-72	B-		4
65-69	C+		3
60-64	C		2
50-59	D		1
0-49	F	Minimum level has not been achieved.	0

2. Competency Based Grading System (Non GPA)

This grading system is based on satisfactory acquisition of defined skills or successful completion of the course learning outcomes

Grade	Description
COM	The student has met the goals, criteria, or competencies established for this course, practicum or field placement.
DST	The student has met and exceeded, above and beyond expectation, the goals, criteria, or competencies established for this course, practicum or field placement.
NC	The student has not met the goals, criteria or competencies established for this course, practicum or field placement.

B. Temporary Grades

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy at <http://camosun.ca/about/policies/index.html> for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	<i>Incomplete:</i> A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.
IP	<i>In progress:</i> A temporary grade assigned for courses that are designed to have an anticipated enrollment that extends beyond one term. No more than two IP grades will be assigned for the same course.
CW	<i>Compulsory Withdrawal:</i> A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.