



CAMOSUN COLLEGE
School of Arts & Science
Department of Psychology

PSYC-245-D01
Drugs & Behaviour
Winter 2021

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, Wednesdays, Thursdays, and Fridays at 11:30 AM to 12:20 PM
(c) Office link	https://ca.bbcollab.com/guest/67b540ef781c47e0ac39d5abd679f30d
(d) Phone	Use the link provided above to call me during office hours
(e) E-mail	If you need to contact me about an urgent personal matter, you can email me at pollockm@camosun.ca . Otherwise, for help with course-related material outside of class time, please use the link provided above to contact me during office hours
(f) Website	The course website is on D2L (http://online.camosun.ca)
(g) Classroom	To go to our virtual classroom, after logging in to course D2L website, click on the link to Collaborate (found in the Navbar at the top right corner of the course D2L Homepage), select the Course Room, and finally choose the Join Course Room option
(h) Class times	Lecture every Thursday at 9:30 AM to 11:20 AM Lab every Friday at 9:30 AM to 10:20 AM See the Course Schedule below for specific dates

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

Course Textbook

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

Methods of obtaining a copy of this textbook:

1. A digital copy of this textbook is available from Camosun's Bookstore. You can gain access to it by going to https://www.camosuncollegebookstore.ca/buy_access_codes.asp, checking the box beside the "PSYC 245" course, and then clicking the "Search" button.
2. You can also borrow the textbook (possibly an older edition) from Camosun's Lansdowne library. Copies of it are available in the course reserve section for 2-hour loans.

Assigned Readings

All of the assigned readings for this course are from this course textbook. The Course Schedule below outlines the specific chapters and subsections of the textbook that you are to read each week. You should complete these assigned readings prior to class so that you can fully contribute to discussions of the material. Concept notes, available in D2L Content, list the names of the concepts and their associated points from the assigned readings that you should focus on the most.

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 opportunity to engage in their own independent research as part of their course assignment. 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 specific dates for when the different items of each course component are due. Course components differ in the nature of their deadlines as follows:

- Self-reflection assignments are each due in the specific class dealing with their topic and will not be accepted for marks afterwards. By sharing in class your work on the self-reflection assignments, this will allow your fellow classmates to benefit from the insights you have gained. You are encouraged to contact the instructor during office hours if you would like to discuss questions about the self-reflection assignments ahead of class time.
- Research assignments have target deadlines that you should strive to correctly complete the assignments by in order to have time to accomplish all of the research assignments within the semester, as each research assignment builds upon the work of previous ones. However, the research assignments will still be accepted for full marks, with no late penalties, after their target deadlines up until the final lab day. This will provide you with an opportunity to revise and resubmit for marks research assignments based on written feedback provided by the instructor.
- Quizzes may be attempted an unlimited number of times up until their deadline and attempts will not be allowed for marks afterwards. The highest score you achieve across your quiz attempts will be recorded as your mark on that quiz. The feedback that you will automatically receive after each quiz attempt will allow you to improve your learning of the concepts.
- Exams may each be attempted a single time on their scheduled date and attempts will not be allowed for marks afterwards.

For all course items except exams, failing to meet a deadline will result in the marks for that course item being waived from your course grade and the weight of that course item being added to all the other course items when calculating your course grade. However, failing to take an exam by its scheduled date will result in a score of zero for that exam. Make-up exams may be granted at the discretion of the instructor for cases in which exams were missed due to hardship or extenuating circumstances (e.g., a medical emergency) if the proper documentation to show this can be provided.

COURSE SCHEDULE

Date	Class	Readings	Class Topic	D2L Quiz	Assignment Due
2021-01-14	Lecture		Introductory Class		Personal Information
2021-01-15	Lab		Research Assignments		
2021-01-21	Lecture	Ch. 1: Some Basic Pharmacology	Lecture #1. Drugs & Pharmacokinetics	Quiz #1	Self-Reflection Assignment #1
2021-01-22	Lab		Research Assignments		Stage #1. Research Question & Rationale
2021-01-28	Lecture	Ch. 4.2: The Synapse; Ch. 4.5: Neurotransmitters	Lecture #2. Pharmacodynamics	Quiz #2	Self-Reflection Assignment #2
2021-01-29	Lab		Research Assignments		Stage #2. Primary Research Articles & References
2021-02-04	Lecture		Midterm Exam #1 (covers Lectures #1-2)	Midterm Exam #1	Self-Reflection Assignment #3
2021-02-05	Lab		Research Assignments		Stage #3. Article Summaries
2021-02-11	Lecture	Ch. 4.3: The Nervous System	Lecture #3. Nervous System	Quiz #3	
2021-02-12	Lab		Research Assignments		Stage #4. Hypotheses
2021-02-18	Lecture		Reading Break (no classes)		
2021-02-19	Lab		Reading Break (no classes)		

2021-02-25	Lecture	Ch. 2: Behavioral Analysis of Drug Effects; Ch. 3: How We Adapt to Drugs	Lecture #4.Behavioral Analysis & Adaptation	Quiz #4	Self-Reflection Assignment #4
2021-02-26	Lab		Research Assignments		Stage #5.Correlational Study Methods
2021-03-04	Lecture	Ch. 5: Substance Use and Addictive Disorders	Lecture #5.Addiction & Treatments	Quiz #5	Self-Reflection Assignment #5
2021-03-05	Lab		Research Assignments		
2021-03-11	Lecture		Midterm Exam #2 (covers Lectures #3-5)	Midterm Exam #2	Self-Reflection Assignment #6
2021-03-12	Lab		Research Assignments		
2021-03-18	Lecture	Ch. 6: Alcohol; Ch. 7: Anxiolytics and Sedative-Hypnotics	Lecture #6.Depressants	Quiz #6	
2021-03-19	Lab		Research Assignments		Stage #6.Correlational Study Results; Stage #7.Correlational Study Discussion
2021-03-25	Lecture	Ch. 8: Tobacco and Nicotine; Ch. 9: Caffeine and the Methylxanthines; Ch. 10: Psychomotor Stimulants	Lecture #7.Stimulants	Quiz #7	Self-Reflection Assignment #7
2021-03-26	Lab		Research Assignments		Stage #8.Experimental Study Methods
2021-04-01	Lecture	Ch. 11: Opioids	Lecture #8.Opioids	Quiz #8	Self-Reflection Assignment #8
2021-04-02	Lab		Good Friday (no classes)		
2021-04-08	Lecture	Ch. 12: Antipsychotic Drugs; Ch. 13: Antidepressants	Lecture #9.Antipsychotics & Antidepressants	Quiz #9	Self-Reflection Assignment #9
2021-04-09	Lab		Research Assignments		
2021-04-15	Lecture	Ch. 14: Cannabis; Ch. 15: Hallucinogens, Psychedelics, and Club Drugs	Lecture #10.Cannabinoids & Hallucinogens	Quiz #10	Self-Reflection Assignment #10
2021-04-16	Lab		Research Assignments		Stage #9.Experimental Study Results; Stage

					#10.Experimental Discussion
TBA			Final Exam (covers Lectures #6-10)	Final Exam	

Class Attendance

Attendance at the first class is mandatory. According to Camosun’s policy, students who fail to attend the first class and who do not contact the instructor (e.g., by email) prior to class with a satisfactory explanation will have their seat in the course forfeited. If you decide to miss any subsequent classes, you are responsible for ensuring that you understand all materials and are aware of any announcements, including those that may alter future course events.

You are encouraged to join the virtual classroom (via D2L Collaborate) approximately 10 minutes prior to the scheduled start time of the class. Joining 10 minutes early helps alleviate stress for the participants by allowing time to correct any potential technical problems before the class has begun and ensures the maximum amount of class time can be used effectively. Please be considerate and join early.

Only an audio connection (i.e, microphone) is required for my virtual classes and a video connection (i.e., webcam) is optional. Once you've joined the virtual classroom, please test your audio connection in advance of the class time. See the D2L Collaborate Student Tutorial (<https://elearningtutorialscomsun.opened.ca/wp-content/uploads/sites/1304/2020/03/JoiningBBCUSession-Students-D2L-Jan2020.pdf>) for help with this.

For technical assistance with the virtual classroom, please contact D2L Support: desupport@camosun.ca

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 of each item	Number of items	Total weight
Self-reflection assignments	3%	10	30%
Research assignments	3%	10	30%
Quizzes	1%	10	10%
Exams	10%	3	30%

Each of the course 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.

The following cutoffs in percentage points, which are standard at Camosun, will be used in calculating final course letter grades:

Letter Grade	A+	A	A-	B+	B	B-	C+	C	D	F
Percentage	90 to 100	85 to 89	80 to 84	77 to 79	73 to 76	70 to 72	65 to 69	60 to 64	50 to 59	0 to 49

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. Extra assignments (beyond what is listed below) will NOT be offered to improve your final grade.

Self-Reflection Assignments

Psychological research has found across a number of different fields (e.g., development, memory, and expertise) that meaningful learning depends upon the degree to which you can relate new information to your previously learned experiences. According to this *Constructivist* view of learning, the greater the amount and quality of these connections you make, the more you can truly understand a concept. Therefore, in order to make the concepts in this course more meaningful to you, the self-reflection assignments will have you relate course concepts to your own personal interests and use your own unique personal experiences to develop insights into the workings of the mind. Instructions for the self-reflection assignments are available in D2L Content. In order to receive marks on these assignments, in the class dealing with each assignment's topic you will be provided with an opportunity to discuss your answers to randomly selected questions from that assignment. The marking of the self-reflection assignments will be based upon the degree to which you can in your own words accurately and clearly relate its course concepts to your personal interests/experiences. By sharing in class your work on the self-reflection assignments, this will allow your fellow classmates to benefit from the insights you have gained. You are encouraged to contact the instructor during office hours if you would like to discuss questions about the self-reflection assignments ahead of class time.

Research Assignments

In order for you to gain first-hand experience in conducting psychological research, you will develop and write up in stages throughout the semester a psychopharmacological research project involving a longitudinal study of yourself and your group members. Instructions, forms, templates, and examples for these assignments are available in D2L Content. Each week, you will work on the project outside of class time and then in lab verbally present your work for approval from your instructor before submitting your written work through D2L Assignments. The instructor will provide verbal feedback in lab and written feedback once a week after each week's research assignment deadline. Since each stage builds on the work of previous stages, you must correctly complete each stage in order to receive marks on subsequent stages, with opportunities given for revisions based on the written feedback provided (see the Deadline section above). Groups are encouraged to work on research assignments ahead of their scheduled deadlines but must wait for written instructor approval of proposed methods before data collection takes place.

Stage #1. *Research Question & Rationale* – You will identify a legal recreational drug that you already regularly use and that you have a psychopharmacological question about which you wish to have answered and that you are comfortable sharing with the rest of the class the results you will eventually collect on yourself about it. In lab, you will be assigned to groups with fellow students interested in a similar topic as yourself in order to work with them on this project. In your group, you will list the reasons why you and 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 those reasons.

Stage #2. *Primary Research Articles & References* – You will perform a literature search to identify what possible answers to your research question previous psychopharmacological research has found and that later (in Stage #4 below) you will design hypotheses to test with your research group. You will then track down primary research articles that provide evidence for these claims, with each member of your group contributing different answers and primary research articles. Finally, you will reference these articles in APA format.

Stage #3. *Article Summaries* – For each of the primary research articles that you 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 citations of these articles in APA format.

Stage #4. *Hypotheses* – For each of the possible answers that you contributed to your group, you will generate a hypothesis that makes a testable prediction about the direction of the relationship between two variables (a predictor variable and an outcome variable) based on your article summaries.

Stage #5. *Correlational Study Methods* – For each of the hypotheses that you contributed to your group, you will describe in detail how your group could quantitatively measure natural variations in that variable over time (i.e., longitudinally) similarly within each of your group's members. You can base these methods on those previously used in the scientific literature (as outlined in your article summaries) or they can be entirely of your own creation.

Stage #6. *Correlational Study Results* - Following the instructor's written approval of your group's proposed correlational methods, you will start taking measurements of yourself for testing each of

your group members' hypotheses. (IMPORTANT NOTE: findings from a project whose methods have not been approved will receive a mark of zero. Do not start data collection until your group has first received written approval of its proposed methods.) In order to verify the time course of your measurements, on each day of your correlational study you must submit to D2L Assignments updates of your data analyses. Based on the data collected on yourself and separately on the data pooled across your group members, you will perform correlational analyses to see whether this data supports any of your group's hypotheses. You will then construct a table that reports the correlation coefficients from these analyses and produce scatterplots that visually display the relationships between the variables.

Stage #7. *Correlational Study Discussion* - Based on your group's correlational study results, you will state which of your group's hypotheses were confirmed and which one of them received the strongest support (i.e., had the highest positive/negative correlation coefficient). (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 relate the group's results to the possible answers you previously contributed to the group during the literature search. You will also compare your group's results to those of the studies you contributed article summaries about and for any discrepancies in findings speculate upon their possible reasons due to methodological differences.

Stage #8. *Experimental Study 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 similarly on each of 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 (as outlined in your article summaries) 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 Study Results* – Following the instructor's written approval of your group's proposed experimental methods, you will start carrying out those methods on yourself. (IMPORTANT NOTE: findings from a project whose methods have not been approved will receive a mark of zero. Do not start data collection until your group has first received written approval of its proposed methods.) In order to verify the time course of your measurements, on each day of your experimental study you must submit to D2L Assignments updates of your data analyses. Based on the data collected on yourself and separately on the data pooled across your group members, you will perform inferential statistics (i.e., *t*-tests). You will then construct a table that reports the descriptive statistics from this study and produce a bar graph that visually displays the difference in effects between conditions.

Stage #10. *Experimental Study Discussion* – Based on your group's experimental study results, you will conclude whether a causal relationship exists between the two variables in your group's experimental hypothesis. (IMPORTANT NOTE: Your assignment mark is not dependent on whether your hypothesis was 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 your group's original rationale for conducting the study, and reflect on their implications and possible practical applications.

Personal Information

Since both the self-reflection assignments and the research assignments (described above) will require you to relate your personal interests to those assignments, it is essential that you first inform me of what those interests are so that I can better assist you with the assignments. Therefore, in the introductory class I will ask that you share this information with me and then submit to D2L Assignments your filled-in Personal Information form (a copy of this form is available in D2L Content) before I can provide you with marks on the assignments.

Quizzes

Since your learning will be enhanced by testing yourself and practicing your retrieval of the course information from memory (known as the *testing effect* or *retrieval practice effect*), for each set of course concepts you will be assigned a quiz. All quizzes will cover solely the material from the assigned readings that the concept notes outline (see the Assigned Readings section above). Each quiz will contain 20 questions about randomly chosen concept points on a given lecture topic. Each

question on the quizzes will describe one of the concept points and asking for the name of that concept. The format of the quizzes will be matching-type questions, with each question listing alphabetically as answer options the names of all the concepts from the relevant lecture and the student will be instructed to match the given concept description with its concept name. Half of the quiz questions will be *knowledge-type questions* which use for descriptions of the concepts the same wording as the points in the concept notes, while the other half of quiz questions will be *understanding-type questions* which reword these points usually in the form of a real-life scenario. You can access each quiz through D2L Quizzes and take it an unlimited number of times up until its deadline (see the Deadlines section above), with only the highest score you achieve recorded as your mark for that quiz. In addition to being worth marks, the quizzes will also help prepare you for exams since they cover the same content from the concept notes (although they use different scenarios for the understanding-type questions).

Exams

Exams can be accessed through D2L Quizzes and will follow the same format as the quizzes (as described above), except that they will be longer (50-100 questions), cover multiple lecture topics, and only contain understanding-type questions. The content of the questions will cover equally the concepts from each lecture topic that the exam is designed to assess your understanding of. Exams will not be cumulative (e.g., the final exam will only cover material that came after the second midterm exam). You will only be given a single attempt at each exam.

6. Grading System

- Standard Grading System (GPA)
- Competency Based Grading System

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

Free Microsoft Word & Excel

Since many of the course assignments require the use of Microsoft Word and Excel, if you do not already have Office 365 software installed on your computer then it is recommended that you download this software for free from the college's website (<http://camosun.ca/services/its/other-services.html>). If you experience any trouble with installing this software, please contact ITS Service Desk (itsservicedesk@camosun.ca) for assistance.

PowerPoint Slides & Videos

For each lecture topic, PowerPoint slides are available in D2L Content and video recordings in D2L Course Media. These lecture slides and videos supplement the content in the assigned readings and provide an additional source for helping you understand the course concepts.

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, Student Ancillary Fees, Academic Integrity, Grade Review & Appeals, Student Misconduct and Academic Accommodations for Students with Disabilities 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.