

# PSYO 335 001

Drugs and Behaviour  
2024 Winter Term 2

Location: COM 201 ([map](#))

Time: Tuesdays and Thursdays, 3:30-5:00pm



**Instructor:** Dr. William (Spencer) Murch (pronouns: he/him/his)

**Office Hours:** Thursdays 2:30-3:30pm (ART 280J)  
or on Zoom by appointment.

**Email:** [spencer.murch@ubc.ca](mailto:spencer.murch@ubc.ca)

*Hi, I'm Spencer! I am a cognitive psychologist and postdoc researcher. When I'm not teaching, I work as a postdoctoral fellow at the University of Calgary, and a member of the Advisory Board on Safer Gambling with the UK Gambling Commission. My research develops artificial intelligence systems that help to prevent gambling addiction.*

## Teaching Assistants:

TBA

**Email:** TBA

**Online Office Hours:** TBA

## Land Acknowledgment

As a learning community, we come together from all over the world. I would like to respectfully acknowledge the [Syilx Okanagan Nation](#) and their peoples, in whose traditional, ancestral, and unceded territory UBC Okanagan is situated.

If you live in Kelowna – like I do – then you also enjoy the privileges of living, working, and playing in Syilx Okanagan territory. I would like to encourage you to reflect on the history of this region and the economic, social, and environmental systems that were developed and maintained here for thousands of years prior to colonization.

Regardless of where you find yourself, I would also like to encourage you to learn more about contributions made by the traditional owners and caretakers of the [land or territory](#) where you live. As you reflect on our collective human history, I ask you to please renew your personal commitment to treating others with dignity, honesty, and compassion.

# Course Overview

In this course, we will survey topics related to the effects of drugs on behaviour. Cellular mechanisms of action, drug absorption, tolerance, addiction, withdrawal, and placebo effects. Classes of drugs studied will include alcohol, tranquilizers, nicotine, stimulants, opiates (and opioids), cannabis, hallucinogens, antidepressants, and antipsychotics.

**Prerequisites:** Two of PSYO 219, PSYO 220, PSYO 230, PSYO 241, PSYO 252, PSYO 270, PSYO 271, PSYO 298, PSYO 299 or 6 credits of 200-level Psychology.

**By the end of this course, you will develop foundational knowledge on the topics of drugs, behavioural pharmacology, and addictive disorders. Specifically, you will:**

1. Learn neurobiological mechanisms underlying key drug effects.
2. Learn about psychological and behavioural effects of several drug classes.
3. Develop up-to-date knowledge about various drugs and their spiritual, recreational, and pharmaceutical uses.

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# Course Material

## Required Readings

"**Drugs and Behavior: An Introduction to Behavioral Pharmacology**" (8<sup>th</sup> edition) by Hancock & McKim (Pearson; ISBN-13: 9780137515653). Available as an [eBook](#), and in physical form at the UBCO Bookstore.

This textbook provides important details for the material I will present during the lecture portion of the course. It is well-written and straight to the point. **All material in chapters 1-15 of this textbook is considered testable on my midterms and exams.** This course requires that you read this textbook. I also strongly recommend you avoid earlier versions of the textbook. The 7<sup>th</sup> edition looks somewhat similar but note that it contains much out-of-date information related to the DSM. Where any conflict occurs, lecture material will be considered authoritative over the 8<sup>th</sup> edition of the textbook, which in turn is considered authoritative over earlier versions of the same text.

## Optional Readings

If you are very eager to dive into the world of drug psychology, I would begin by reading one or more of these excellent books. These books are not required – their content will not be directly tested. Only buy them if you really want to do some learning on your own. The UBCO Library has worked to make one copy of each book available through [course reserves](#). If the one you want is out on loan, and you don't want to wait for it to be returned, check out the purchase options linked below.

["Awakenings"](#) by Sacks (Penguin Random House)

["The Urge: Our history of addiction"](#) by Fisher (Penguin Random House)

["Plants, People, and Culture: The science of ethnobotany"](#) by Balick & Cox (CDC Press)

# Course Assessments

Assessment	% Weight (without term paper)	% Weight (with term paper)
Midterm exam #1	30%	20%
Midterm exam #2	30%	20%
Optional term paper	0%	30%
Final exam	40%	30%

## Midterm exams

Midterm exams will be in-person. Their material is not cumulative. They may be comprised of multiple choice, short answer, and essay questions. Each midterm will be 80 minutes in duration.

## Optional term paper

This course features an optional term paper for students who feel their talents are better represented in long-form written format. This assignment is entirely optional. If you choose to submit the term paper, it will be worth 30% of your PSYO 335 grade and will reduce the weight of the other course assessments by 10% each. Otherwise, it is worth 0% of your grade. If you submit the term paper, it

will be counted towards your overall grade, even if your overall grade decreases as a result. In other words, if you choose to submit a term paper, make sure to put real effort into it. This paper is due on the last day of class. Deadline extension requests will not be accommodated.

### **Assignment Instructions**

Throughout this class, we will discuss many drugs with similar uses in the world of mental health. Your job is to describe one mental disorder listed in the DSM-V (e.g., Generalized Anxiety Disorder), and then compare two different kinds of drugs (e.g., anxiolytic medications vs. alcohol) that humans use to treat it. The two drugs you choose must be from different classes (i.e., you cannot select both barbiturates and benzodiazepines from the anxiolytic class). For the paper, you will first describe the mental disorder you have chosen to investigate. You will then describe the pharmacological action and drug effects of each of the two drugs you have selected. Then, you will compare noteworthy aspects of the two drugs (this may relate to their pharmacokinetics, pharmacodynamics, efficacy, side effects, etc.). In your conclusion, you will summarize your findings and explain whether (and why) you think one of the two drugs is a better treatment for the disorder of interest.

### **Assignment Format**

- Not less than 1,500 words, and not more than 2,000 words.
- 12-point font, either Times New Roman, or Arial.
- You must provide at least two academic sources. The DSM-V and Hancock & McKim textbook may be cited but do not count towards this requirement. You may not cite our course lectures. All cited sources should meaningfully inform your paper.
- In-text citations provided using APA format with full references in a bibliography at the end (not included in word count rule above).
- Sections titled as follows: “Disorder of Interest”, “Drug Treatment #1”, “Drug Treatment #2”, “Comparison”, and “Conclusion”. As a general rule, each section should be approximately 300-400 words in length.

### **Final exam**

The final exam will be in-person during the April exam period. It’s location, date, and time will be set by the registrar’s office, and I will make you aware as soon as possible. The final exam is cumulative with somewhat greater focus on material presented after Midterm #2. The final exam will be 2.5 hours in duration, and will be comprised of multiple choice, short answer, and essay questions.

In cases of examination hardship (3 or more exams scheduled within a 24-hour period), students will be permitted to apply for out-of-time final examinations. Beyond exam hardship, concessions may be made where specified in the [UBC Okanagan Academic Calendar](#).

## Sona research activity (up to 2% bonus)

Students earn Sona credit points for their eligible courses from participating in research activity. This can be either through direct participation in research through the Sona online research system (Option 1), by completing summaries of primary research articles (Option 2), or by a combination of the two types of activities. First year courses (i.e., PSYO 111 and PSYO 121) include 4% as part of the final course grade for participating in Sona research activity, while second year and higher courses allow for a 2% bonus to be added to the final course grade for participating.

### Research Participation in Online Research System (Option 1)

As a participant in one of the numerous research studies posted at <http://ubco.sona-systems.com/>, you will obtain 0.5% credit for each 0.5 hour of participation. Hence, studies requiring a 1-hour time commitment provides a credit of 1%, 1.5 hours provides a credit of 1.5%, and 2 hours provides a credit of 2.0%, etc.

#### *Important Requirements*

You may participate in more than one study in order to earn credits. It is important to sign up for studies early in the semester in order to increase the odds that a timeslot is available. If you wait until later in the semester, timeslots may no longer be available.

Students must participate in at least one study from List A (that is either in-person, uses Zoom interactions, experience sampling, daily diary etc.) of any credit value for each in-person course they are seeking credit for. Studies will be identified as coming from List A or List B on Sona to assist students in ensuring they can fulfill this requirement. This requirement is limited to in-person courses only as there may be students who are taking courses fully remotely from a different location/time zone, for whom in-person or online synchronous studies would not be feasible, thus making it difficult to meet these requirements. Students registered in online courses can complete their credits from participation in studies from either entirely List A, entirely List B, or a combination of the two.

This course will offer a maximum of 2 credits. You will only receive 2 credits if you complete at least 2 credits worth of studies with at least one study completed from List A and at least one study completed from List B. If you earn 2 credits only from a single list, you will incur a 0.5 credit penalty and only receive a maximum of 1.5 credits. This penalty is in effect regardless of how many credits have been earned; it deducts from the maximum amount that can be earned for the course.

#### *Logging On to The System*

Sona is only open for those students who are registered in a psychology course offering Sona credit points. Please only use the request account option if you have never used the Sona system before. If you have used the Sona system before, please use the most recent login information you remember to log in.

#### *Missed Appointments & Penalties*

Missed appointments (i.e., failure to cancel the appointment at least 3 hours prior to the session) will be tracked. The consequence will be that you will not receive credit for participation in the study and you will be assigned an unexcused no-show. The unexcused no-show designation will cause you to lose the credit value of the study from the total possible credit points you can earn for your course. For example, if you are in PSYO 111 (or 121), you can earn up to 4.0 credits. If you miss an hour-

long session that you signed up for (i.e., 1.0 credit) and don't cancel it in advance, the maximum credits that you can now earn for your course is 3.0, regardless of how many studies you complete.

If, after consenting to participate and starting a session (or survey), you decide to withdraw your consent, to avoid receiving an unexcused no-show on Sona, you must do one of the following:

- if it is an online study, you must cancel your Sona sign-up and/or contact Shirley ([psyc.ubco.research@ubc.ca](mailto:psyc.ubco.research@ubc.ca)) if you are unable to cancel your sign-up;
- if it is an in-person study, you must let the researcher know directly. Their email can be found on the main description page for the study (little envelope icon). Depending upon the study, they will either cancel your session or assign you an excused no-show (meaning that you will not be penalized).

Your ability to withdraw your data will depend upon the study. Instructions for withdrawing your data (including limitations) will be described in the study's consent form.

Please email [psyc.ubco.research@ubc.ca](mailto:psyc.ubco.research@ubc.ca) with any questions or concerns that you may have regarding the Sona system. Your professor or instructor does NOT have access to this information.

### **Research Summary Assignment (Option 2)**

As an alternative to participating in research studies, you may obtain Sona credit points by completing library-writing projects to a satisfactory level. Each library-writing project is worth a total of two credits.

#### *Important Requirements*

1. This project consists of reading and summarizing (in written form) a recent, peer-reviewed, primary research article.

- A "recent" article has been published within the past 12 months.
- A "peer reviewed" article is one that has been reviewed by other scholars before it is accepted – for example, it **cannot** be a news item, an article from a popular magazine, a notice, or a letter to the editor.
- A "primary" research article describes an experiment or study where data are collected by the authors. In other words, the article you choose to review **cannot** be a book review, literature review, or summary article.

2. You must choose an article published by one of the following agencies:

- The American Psychological Society - *Psychological Science*, *Current Directions in Psychological Science*, *Psychological Science in the Public Interest*, or *Perspectives on Psychological Science*.
- The American Psychological Association - [www.apa.org/journals/by\\_title.html](http://www.apa.org/journals/by_title.html) has a full listing.
- The Canadian Psychological Association - *Canadian Psychology*, *Canadian Journal of Behavioural Science*, or *Canadian Journal of Experimental Psychology*.

- The Psychonomic Society - *Behavior Research Methods, Cognitive, Affective, & Behavioral Neuroscience, Learning & Behavior, Memory & Cognition, Perception & Psychophysics, or Psychonomic Bulletin & Review.*

### 3. Other Assignment Guidelines

The summary should be about 300-500 words in length. The source must be cited and referenced in accordance with the *Publication Manual of the American Psychological Association*. The review will be graded on a pass – fail basis (2% or 0%). At least **14 days before the end of classes** each term, submit the following to the course instructor:

- the article summary
- a copy of the article
- a cover page that specifies your name, student number, email address, and word count of the summary.
- the course title and number

Submitting the assignment 14 days in advance is necessary to ensure that you have an opportunity to make corrections, if required. If you do not check your email frequently, provide a phone number on the cover page.

## Course Policies

### Attendance

In-person attendance is important for your success in this course. If you miss a class, it is your responsibility to go through the assigned readings and slides posted to canvas after each class, and ask any questions at office hours. Please do not come to class if you are feeling ill. Instead, check Canvas for archived lecture slides, ask a classmate to share their notes when you are feeling better, and check in with our course TAs to clear up any topics that remain unclear after catching up on the slides and notes.

### Accessibility

In accordance with the BC Human Rights Code and [UBC Policy LR7](#), I am committed to making sure that every student has a fair chance at success in this course. The [Disability Resource Centre](#) (DRC) facilitates a wide range of accommodations for students with disabilities and ongoing medical conditions. If something is creating a barrier between you and our course content, I encourage you to [register with the DRC](#) so that we can explore ways to make the course more accessible for you. Please note that the DRC requires students to make any accommodation requests at least 7 days before any test, and 7 days before the start of the formal exam period in April.

**For more information**, contact Earllene Roberts – Diversity Advisor for the Disability Resource Centre, University Centre building room #214. Phone: [250-807-9263](tel:250-807-9263) Email: [earllene.roberts@ubc.ca](mailto:earllene.roberts@ubc.ca)

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For any inquiries or concerns regarding how this information is collected, used, or stored, please contact [drc.questions@ubc.ca](mailto:drc.questions@ubc.ca).

## Missing Assessments

Sometimes, an acute illness or serious life event makes us unable to sit an exam or submit an assignment on time. UBC has introduced a compassionate policy for navigating these events. If you have an illness or serious life event that will prevent you from completing an exam or assignment on time, [please fill out the form found on this webpage](#) and email it to me ([spencer@psych.ubc.ca](mailto:spencer@psych.ubc.ca)) as soon as possible. This declaration does not exempt you from any exam or assignment. I will contact you to arrange a make-up exam or assignment.

Further information on Academic Concession can be found under Policies and Regulation in the [Okanagan Academic Calendar](#).

## Grading

Faculties, departments, and schools reserve the right to [scale grades](#) in order to maintain equity among sections and conformity to University, faculty, department, or school norms. Students should therefore note that an unofficial grade given by an instructor might be changed by the faculty, department, or school. Grades are not official until they appear on a student's academic record.

Percent Grade	Letter Grade
90 – 100	A+
85 – 89	A
80 – 84	A-
76 – 79	B+
72 – 75	B
68 – 71	B-
64 – 67	C+
60 – 63	C
55 – 59	C-
50 – 54	D
0 – 49	F

## Reviewing Assessments

Midterm exams will be viewable in person once all midterms have been graded and grades have been released. Details for midterm viewings will be posted to Canvas following the release of midterm grades. Final exams can be viewed in person once all final exams have been graded and grades have been released. Details for final exam viewings will be sent out following the release of final exam grades on Canvas.

Please email me ([spencer.murch@ubc.ca](mailto:spencer.murch@ubc.ca)) or your course TAs to discuss any points of concern or clarification for either the midterms or final exam.

## Academic Honesty and Academic Misconduct

All UBC students are expected to behave as honest and responsible members of an academic community. While I neither want nor expect cheating or plagiarism to occur, I am prepared to take appropriate actions to ensure that all students receive the grades they have earned. Whenever you turn in an assignment or exam in this course, you can expect that I will use the best-available tools and procedures to discourage and discover [academic misconduct](#).

All suspected cases of academic misconduct will be investigated. When the university determines that academic misconduct has occurred, the work in question is typically granted zero credit (0%). Pursuant to Section 61 of the [University Act](#), UBC's president has the right to impose additional penalties including a failing grade for the course, and suspension from the university.

Students are responsible for informing themselves of the applicable standards for academic honesty. All of the following activities count as academic misconduct:

- ◆ Plagiarism, defined as any time a student submits work done by another person or AI system.
- ◆ Collusion, defined as working with others to give or receive help on assessments.
- ◆ Submitting the same assignment to multiple classes ("self-plagiarism").
- ◆ Asking someone else to complete an assessment on your behalf.
- ◆ Completing an assessment on someone else's behalf.
- ◆ Searching for or publishing assessment answers on "study guide" websites.

I expect that every graded assessment in this course will be **completed independently**. If you are unsure about whether a particular action constitutes academic misconduct, you must contact an instructor or teaching assistant as soon as possible.

## Helpful Resources

### UBC Student Learning Hub

Your go-to resource for free math, science, writing, and language learning support. The Hub welcomes undergraduate students from all disciplines and year levels to access a range of supports that include tutoring in math, sciences, languages, and writing, as well as help with study skills and learning strategies.

In Person: [LIB room #237](#)

Phone: [250-807-9185](tel:250-807-9185)

Online: <https://students.ok.ubc.ca/student-learning-hub/>

### UBC Okanagan Equity and Inclusion Office

UBC Okanagan is a place where every student, staff and faculty member should be able to study and work in an environment that is free from discrimination and harassment. UBC prohibits discrimination and harassment on the basis of the following grounds: age, ancestry, colour, family status, marital status, physical or mental disability, place of origin, political belief, race, religion, sex, sexual orientation, or unrelated criminal conviction. If you require assistance related to an issue of equity, discrimination, or harassment, or to get involved in human rights work on campus, please contact the Equity and Inclusion Office.

In Person: [UNC room #216](#)

Phone: [250-807-9291](tel:250-807-9291)

Email: [equity.ubco@ubc.ca](mailto:equity.ubco@ubc.ca)

Online: <https://equity.ok.ubc.ca/>

### UBC Health & Wellness

At UBC Okanagan health services to students are provided by Health and Wellness. Nurses, physicians, and counsellors provide health care and counselling related to physical health, emotional/mental health, and sexual/reproductive health concerns. As well, health promotion, education and research activities are provided to the campus community. If you require assistance with your health, please contact Health and Wellness for more information or to book an appointment.

In Person: [UNC room #337](#)

Phone: [250-807-9270](tel:250-807-9270)

Email: [healthwellness.okanagan@ubc.ca](mailto:healthwellness.okanagan@ubc.ca)

Online: <https://students.ok.ubc.ca/health-wellness/>

### UBC Okanagan Walk-In Well-Being Clinic

The Walk-In Well-Being clinic offers no-fee, brief, single-session psychological services. Sessions are led by a doctoral student in clinical psychology and supervised by a registered psychologist (UBCO Faculty member). Clinicians can provide support with stress management, sleep, self-care, depression, anxiety, interpersonal issues, substance misuse, coping with academic demands/stressors, and provide options for connecting to additional resources.

Virtual or in-person sessions are available at the UBCO Psychology Clinic.

Location: ASC 167

With or without an appointment, on Tuesdays and Thursdays between 10 am and 3 pm from September to June, excluding campus closures.

Phone: 250-807-8241 (ext. 1)

Email: [ipc.ok@ubc.ca](mailto:ipc.ok@ubc.ca)

Online: <https://psych.ok.ubc.ca/psychology-clinic/walk-in-wellness/>

### **Office of the Ombudsperson for Students**

The Office of the Ombudsperson for Students offers independent, impartial, and confidential support to students in navigating UBC policies, processes, and resources, as well as guidance in resolving concerns related to fairness.

Email: [ombuds.office@ubc.ca](mailto:ombuds.office@ubc.ca)

Online: <https://ombudsoffice.ubc.ca/>

### **Safewalk**

Rather not walk alone at night? Not too sure how to get somewhere on campus? For more information, contact Safewalk.

Phone: [250-807-8076](tel:250-807-8076)

Online: [www.security.ok.ubc.ca](http://www.security.ok.ubc.ca)

### **Sexual Violence Prevention and Response Office (SVPRO)**

A safe and confidential place for UBC students, staff and faculty who have experienced sexual violence regardless of when or where it took place. Just want to talk? SVPRO is here to listen and help you explore your options. They can help you find a safe place to stay, explain your reporting options (UBC or police), accompany you to the hospital, or support you with academic accommodations. You have the right to choose what happens next. SVPRO supports your decision, whatever you decide.

Phone: [250-807-9640](tel:250-807-9640)

Online: <https://svpro.ok.ubc.ca/>

### **Independent Investigations Office (IIO)**

If you or someone you know has experienced sexual assault or some other form of sexual misconduct by a UBC community member and you want the Independent Investigations Office (IIO) at UBC to investigate, please contact them. Investigations are conducted in a trauma-informed, confidential, and respectful manner in accordance with the principles of procedural fairness.

You can report your experience directly to the IIO.

Email: [director.of.investigations@ubc.ca](mailto:director.of.investigations@ubc.ca)

Phone: [604-827-2060](tel:604-827-2060)

Online: <https://io.ubc.ca/>

## PSYO 335 001 Schedule

Class	Hancock & McKim (Required)	Optional (just for fun)	Lecture Topics	Assessment
Jan 7		Fisher Ch. 1-3	Introduction + Drug History	
Jan 9	Ch. 1	Sacks "Prologue"	Pharmacology	
Jan 14	Ch. 2	Sacks "Magda B."	Drug research	
Jan 16	Ch. 4	Sacks "Aaron E."	Neurophysiology 1	
Jan 21	Ch. 4	Sacks "Leonard L."	Neurophysiology 2	
Jan 23	Ch. 3	Sacks "Perspectives"	Expectation, sensitization, and tolerance	
Jan 28	Ch. 5	Fisher Ch. 4-6	Addiction 1	
Jan 30	Ch. 5		Addiction 2	
Feb 4				<b>Midterm exam #1</b>
Feb 6	Ch. 12	Balick & Cox Ch. 1	Antipsychotic drugs	
Feb 11	Ch. 13		Antidepressant drugs 1	
Feb 13	Ch. 13		Antidepressant drugs 2 (guest lecture)	
<b>Midterm Break – No Lecture</b>				
Feb 25	Ch. 7		Anxiolytic and sedative drugs 1	
Feb 27	Ch. 7		Anxiolytic and sedative drugs 2	
Mar 4	Ch. 6	Fisher Ch. 7	Alcohol 1	
Mar 6	Ch. 6		Alcohol 2	
Mar 11	Ch. 11	Fisher Ch. 8	Opiates and opioids 1	
Mar 13	Ch. 11		Opiates and opioids 2	
Mar 18				<b>Midterm exam #2</b>
Mar 20	Ch. 8	Fisher Ch. 9-12	Nicotine	
Mar 25	Ch. 9		Caffeine	
Mar 27	Ch. 10		Stimulants	
Apr 1	Ch. 14	Balick & Cox Ch. 6	Cannabis 1	
Apr 3	Ch. 14	Balick & Cox Ch. 6	Cannabis 2	
Apr 8	Ch. 15	Balick & Cox Ch. 7	Hallucinogens and psychedelics	<b>Optional term paper due</b>
<b>Final exam (to be scheduled by the Registrar)</b>				