

The University of British Columbia

PSYC304-002

Brain and Behaviour— First Half

Fall 2019 (2019W1)

Lectures: Tuesday/Thursday, 9:30-11 am, Buchanan A201

Instructor: **Dr. Jay Hosking, Department of Psychology**
jayhosking@psych.ubc.ca

I respond to emails Monday-Friday, and may or may not respond to emails on the weekend. When contacting me, please use your UBC email, and please note which course you are in, i.e. PSYC304-002.

Office hours: Held every day of the week, sometimes in office, sometimes by videochat (Skype); please use the website **jayhosking.youcanbook.me** to book

TA: **Jackson Schumacher**
schumacher@psych.ubc.ca
TA office hours by appointment (please email), or by announcement on Canvas

Website: **canvas.ubc.ca**
All lecture slides, additional readings, and messages sent to all students (e.g. grades) will come through Canvas. Please let me know if you're having any issues with the website!

Textbook: *Behavioral Neuroscience*, Breedlove and Watson, 8e. Required (see below).

About PSYC304

Comprised of about 80 billion neurons, with each cell connected to thousands of other neurons, the human brain is a staggeringly complex biological mechanism with nearly infinite routes through which neural signals can flow. Compared to the cells of other organs, which may be replaced over time, the very same brain cells are present with you from your earliest experiences to your death. Your brain is responsible for what you call your “self”: all your preferences, perceptions, memories, dreams, ambitions, desires, goals, emotions, and unique inferences are housed within the “pile of pudding” that accounts for a mere 2-3% of your body. And humans take great advantage of this organ, whether it's creating works of art, lifelong friendships, space stations, or just appreciating the beauty of a sunset over the Pacific.

The first half of this course is about linking the psychological background you have acquired—in essence, a study of behaviour—with the neurobiological underpinnings responsible for that behaviour. To understand our very selves, and the roots of our mind's organization, we must start at the most fundamental unit of the nervous system: the neuron. Indeed, we will see how small changes in (for example) concentration of ions can radically alter our behaviour. From these basic building blocks of nervous system function, we will expand outward into a systems-level understanding of our basic sensory and motor systems, which will reveal evolution's influence on our brain's hierarchy and function.

By the end of the first half of this course you will be able to:

- Explain and critically evaluate current topics and research in the field of neuroscience
- Describe basic biopsychological processes
- Use critical thinking skills through discussion and analysis of neuroscience issues
- Define modern neuroscience and identify the major perspectives within it
- Recognize, recall, connect, and evaluate neuroscientific concepts and theories from specific subfields (e.g., behavioural vs. cognitive)
- Critically evaluate new evidence about brain and behaviour in your daily life
- Understand, describe and differentiate between commonly used research methods in neuroscience, including experimental and correlational designs

Note: whom should you book office hours with?

Please book office hours with your awesome TA if:

- You would like to review one of your exams (note: only your TA will have your exams). When reviewing your exam, you are not allowed to take notes on, or photos of, the exam.
- You would like to discuss content from the course readings and/or study strategies.
- You would like to discuss psychology more generally.

Please book office hours with Dr. Hosking if:

- You would like to discuss lecture content.
- You have an issue with course performance or progress.
- You would like to discuss psychology and neuroscience more generally.

Note on booking office hours with Dr. Hosking:

Please do not use email to book office hours with Dr. Hosking. Instead, I have created a website for all office hours booking: <https://jayhosking.youcanbook.me>. It will show all of my available office hours, as well as where you can find me on campus. Note that I am available on campus on Tuesdays and Thursdays, and available for videochat via Skype (username: jayhosking) on all other weekdays. Please do not book me for multiple timeslots on a given day; there are many students that need help, virtually all issues can be handled within the allotted time, and I will cancel any multiple bookings.

Note on booking office hours with your TA:

Please email your TA with a few available dates/times and they will do their best to accommodate you.

Note on email:

Please bear in mind that instructors get a lot of email and, if possible, would prefer to spend all our preparation time on making the lectures as useful, interesting, fun, and edifying to you as possible. Thus, please keep emails to administrative concerns (e.g. Canvas issues) if you can. If you do send an email that is related to the course content, it should contain no more than one question, and you should try to explain your current understanding of the content in the email, which will be affirmed or corrected by me. But really, if you're struggling with content, please book some office hours!

Note on readings:

The textbook is *Behavioral Neuroscience 8e* by Breedlove and Watson. Previous versions of the textbook may be sufficient for the course, but I cannot guarantee it. The textbook is officially considered “required”, as Dr. Stan Floresco (who runs the second half of the course) tests from it. For the purposes of the first half of the course, **material that was part of the textbook but is wholly unrelated to the lectures will not be tested.** That said, textbooks are invaluable resources for learning, and integral to student success in a course like this. Treat the textbook like a “second teacher”, a way to learn the concepts in class from a slightly different perspective. This is especially useful for difficult topics, or when topics occasionally come and go quickly within the class setting. Please read all assigned chapters prior to the related lecture.

Note on attendance:

Attendance is a critical predictor of success in this course. (In fact, it’s a strong correlate of success for university courses in general.) In this course, material that is taught in class will often be very different from, or supplement, the readings. Moreover, lecture slides are designed to provide a framework for the lecture and any discussions. In other words, **the important part of the lecture is not what is on the slides, but rather the lecture itself.** If you try to rely solely on the slides for studying, you will not be successful, because much of the critical information is not explicitly written. **It is therefore essential that you attend class,** as well as read ahead. **If you do have to miss a class, you are responsible for getting notes from another student.**

Course schedule (tentative):

Week	Dates	Topic	Chapter
1	September 5 th	Course orientation; introduction	Syllabus; 1
2	September 10 th , 12 th	Brain basics; neuroanatomy	2, 6
3	September 17 th , 19 th	Research principles	
4	September 24 th , 26 th	Neural communication I	3
5	October 1 st , 3 rd	Neural communication II	4
6	October 8 th , 10 th	Neuroscience research methods	
7	October 15 th , 17 th	Review (15 th); MIDTERM EXAM (17th October)	
8	October 22 nd , 24 th	The endocrine system	5
9	October 29 th , 31 st	Principles of sensory processing; touch	8
10	November 5 th , 7 th	Vision	10
11	November 12 th , 14 th	Audition; vestibular perception; taste; smell	9
12	November 19 th , 21 st	Motor control	11
13	November 26 th , 28 th	TBD; review	
Exams	December 3 rd -18 th	EXAM 2 (date/time/location TBA)	

Evaluation

1. Exams (up to 50%):

There will be two exams, with the final exam written during the exam period at a time designated by the Registrar's Office (you *must* be able to write at any time during the exam period), and two midterm exams written in class.

(Midterm) Exam 1 (25%) October 17th

(Final) Exam 2 (25%) December 3rd to December 18th

Notes on the exams:

- The exams are not cumulative, but the material will build upon the foundations laid in the first half of the semester.
- There will be no make-up exams for the midterm.
- You may have heard that accommodations have changed substantially this year at UBC; it's true, and I encourage you to read more about it at <http://www.calendar.ubc.ca/vancouver/index.cfm?tree=3,329,0,0>.
- Specifically, if you must miss a midterm exam due to acute illness (e.g. the 'flu), you do not need to supply me (or any of your other instructors) with a medical note. However, you will need to sign a Student Declaration of Academic Concession form, which is available from me. Note that this policy does not apply to exams during the final exam period (for the final exam period, see below).
- If your unavoidable hardship is not an acute illness, then you must present me with evidence of such hardship.
- In any case, you must contact me within 48 hours of the exam if you need accommodation for that exam. **If at all possible, please contact me about accommodations before the exam, not after.**
- Students who plan to be absent for varsity athletics, family obligations, or other commitments, cannot assume they will be accommodated, and must discuss this with me **by September 13th 2019** if they wish to be considered for accommodation.
- Being accommodated for missing a midterm exam is at my sole discretion. Similarly, I may send you to your faculty Academic Advising if I feel ill-equipped to judge the nature of your hardship, as Advising has much more experience in the matter.
- If you are accommodated for missing the midterm exam, that portion of your course grade will be evenly split between the other three exams in the course.
- If you miss the second exam, during the final exam period, you must contact your Faculty Academic Advising Office to address the issue—note that they will probably require unambiguous medical or other documentation.
- You will not be able to write an exam if 1) you are more than 30 minutes late, or 2) another student has already submitted their exam and left the exam room—whichever occurs first.
- Note that, during exams, instructors or invigilators reserve the right to move you to a new seat without providing an explanation.
- All exams will include multiple-choice and short-answer questions.
- Once exams have been marked, grades will be sent out via Canvas.
- You are strongly encouraged to review your exam with your TA.
- Grade adjustments are very uncommon but if a dispute between TA and student occurs for grading, Jay will regrade that component of your exam—this can result in the same grade, an increase, or a decrease, depending on Jay's judgement of your answer. Any grading disputes must be handled within 2 weeks of exam grades being released.

2. Research participation (up to 3% bonus):

You may earn up to 3 extra percentage points on your overall final grade by participating in studies regularly conducted by the Psychology Department and coordinated through the human subject pool (HSP). This provides you with the opportunity to observe the research process directly and to contribute to ongoing research activities at UBC. The extra credits are obtained by signing up for the subject pool at ubc-psych.sona-systems.com, or by completing library writing projects (please see the HSP website). If you plan to earn extra credit through research participation, please register in this online system as soon as possible, as the participation window closes (you can find more details at psych.ubc.ca/undergraduate/human-subject-pool/).

Grading

Your grade for each exam will be sent to you via Canvas. If you wish to inspect your exam, you may do so by meeting with your TA.

In order to reduce grade inflation and maintain equity across course sections, all psychology courses are required to comply with departmental norms for grade distributions. According to departmental norms, the mean grade in a 300-level class is 70% for a good class, 68% for an average class, and 66% for a weak class (with a standard deviation of 13%). Scaling may be used in order to comply with these norms; grades may be scaled up or down as necessary by the instructors or the department. Grades are not official until they appear on your transcript. You will receive both a percent and a letter grade for this course. At UBC, your course percentage is converted to a letter grade according to the following key:

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

Because you are earning a degree at a highly reputable post-secondary institution, the criteria for success are high. The Faculty of Arts offers the following guidelines that broadly characterize the kind of work that is generally associated with the particular grade ranges. These characteristics help put the Psychology Department grading policies into perspective.

Please note that adequate performance is in the C range.

A Range: Exceptional Performance. Strong evidence of original thinking; good organization in written work; capacity to analyze (i.e. break ideas down) and to synthesize (i.e. bring different ideas together in a coherent way); superior grasp of subject matter with sound critical evaluations; evidence of extensive knowledge base.

B Range: Competent Performance. Evidence of grasp of subject matter; some evidence of critical capacity and analytic ability; reasonable understanding of relevant issues; evidence of familiarity with the literature.

C-D Range: Adequate Performance. Understanding of the subject matter; ability to develop solutions to simple problems in the material; acceptable but uninspired work; not seriously faulty but lacking style and vigor.

F Range: Inadequate Performance. Little or no evidence of understanding of the subject matter; weakness in critical and analytical skills; limited or irrelevant use of the literature.

UBC's statement about the University's values and policies

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious and cultural observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions. Details of the policies and how to access support are available here: <https://senate.ubc.ca/policiesresources-support-student-success>

Other Course Policies

During your time in this course, if you encounter medical, emotional, or other personal problems that affect your attendance or academic performance, **please notify me as soon as possible, as well as your Faculty Academic Advising Office**. Please refer to the UBC Calendar for a discussion of academic concession.

The university accommodates students with disabilities who have registered with the Centre for Accessibility office (see below). The university also accommodates students whose religious obligations conflict with attendance or scheduled exams. **Please let me know in advance, by September 13th 2019 if possible, if you will require any accommodation on these grounds.** Other absences (e.g. varsity athletics, family obligations, or similar) are not part of the university policy and you should not assume they will be accommodated. Please discuss these with me by September 13th 2019.

The Centre for Accessibility (previously Access & Diversity). UBC is committed to equal opportunity in education for all students including those with documented physical or learning disabilities. If you believe you fall in this category, please visit the website for the Centre for Accessibility (students.ubc.ca/about/access) to take the necessary steps to ensure that you have every opportunity that you deserve to excel in your studies.

Points to remember!:

- Productive classroom discussion and debate are encouraged.
- You are responsible for all readings and lecture materials.
- Lecture slides will be available on Canvas. However, if you miss a lecture, don't expect to find all of what you missed in the slides.
- Lecture slides will be posted on Canvas the night before each lecture. This is done as a courtesy. Please be aware that we may make significant changes to the slides between that time and the lecture the next day. Revisions of lecture slides will be posted no later than the Friday following a lecture, and will be marked as "final version".
- Please be aware that some of the content in this course can be challenging for those without some background in biology. I will try to provide additional, optional reading sources for you to pursue, should you wish.
- Laptops and similar devices can be effective learning tools and are welcome in class. However, if you are using them for non-class-related activities, it can be distracting for others. So if you plan to use devices for any non-class-related activities, please sit at the back of the room.

Classroom conduct. Our classroom is a place where you should feel safe and respected. It should also be a place that is conducive to learning and intellectual inquiry. Any behaviour on your part that compromises that environment will not be tolerated and you will be asked to leave.

Academic Misconduct

Cheating, plagiarism, and other forms of academic misconduct are very serious concerns of the University, and the Department of Psychology has taken steps to alleviate them. First, the Department has implemented software that can reliably detect cheating on multiple-choice exams by analyzing the patterns of students' responses. Second, the Department subscribes to TurnItIn—a service designed to detect and deter plagiarism. All materials (term papers, lab reports, etc.) that students submit for grading will be scanned and compared to over 4.5 billion pages of content located on the Internet or in TurnItIn's own proprietary databases. The results of these comparisons are compiled into customized "Originality Reports" containing several sensitive measures of plagiarism; instructors receive copies of these reports for every student in their class.

In all cases of suspected academic misconduct the parties involved will be pursued to the fullest extent dictated by the guidelines of the University. Strong evidence of cheating or plagiarism may result in a zero credit for the work in question. According to the University Act (section 61), the President of UBC has the right to impose harsher penalties including (but not limited to) a failing grade for the course, suspension from the University, cancellation of scholarships, or a notation added to a student's transcript.

All graded work in this course, unless otherwise specified, is to be original work done independently by individuals. If you have any questions as to whether or not what you are doing is even a borderline case of academic misconduct, please consult your instructor. For details on pertinent University policies and procedures, please see Chapter 5 in the UBC Calendar (<http://students.ubc.ca/calendar>) and read the University's Policy 69 (available at <http://www.universitycounsel.ubc.ca/policies/policy69.html>).

Wellness Resources

Below is a list of resources you may want to use if you are struggling in any way to manage your responsibilities while in school or the stresses of life in general.

The Kaleidoscope:

the-kaleidoscope.com

A confidential peer-run mental health support group that takes place on campus at least once a week. You may attend the group if you are experiencing any kind of mental health related challenges, or if you're just feeling stressed about school in general. Registration is not required to attend the group. See the website for meeting times and locations. Food and drink are provided.

Counselling Services:

students.ubc.ca/livewell/services/counselling-services

Phone number: 604-822-3811

Counselling services offers a variety of resources to help you maintain your mental health while in school. You may see a counsellor on an individual basis, attend group counselling, or to document an illness if you should require academic concession.

SpeakEasy:

ams.ubc.ca/services/speakeasy/

Phone number: 604-822-9246

A student run service that offers confidential support for students experiencing crisis. Also a good resource for additional information and referrals within the UBC community.

SHARE:

www.vivreshare.org

Self Harm Anonymous Recovery and Education is a program designed to promote self care and educate about self harm. SHARE support groups meet biweekly; times and locations can be found on their website.

UBC Wellness Centre:

students.ubc.ca/livewell/services/wellness-centre

Phone number: 604-822-8450

Speak with other students about tips for managing stress, keeping healthy sleep and eating patterns, concerns about safe sex and more.

Access and Diversity:

students.ubc.ca/about/access

Phone number: 604-822-5844

Access and Diversity provides accommodations for students living with physical or mental disabilities.

Student Health Services:

students.ubc.ca/livewell/services/student-health-service

Phone number: 604- 822-7011

Student health provides students with a variety of healthcare related services to help you maintain your health while studying. Access to doctors and registered nurses.

Mood Disorders Clinic UBC:

ubc-mooddisorders.vch.ca/

A psychiatric program designed specifically to treat individuals living with depression or bipolar disorder.

Live Well, Learn Well:

students.ubc.ca/livewelllearnwell

The Live Well, Learn Well initiative is a resource hub that provides students with information to help improve physical and mental wellbeing.

Mental Health Awareness Club:

ubcmhac.sites.olt.ubc.ca/

A club that offers opportunities to speak about mental health with others and strives to promote mental health awareness throughout the UBC community.

Pacific Spirit Addiction Services:

3rd Floor, 2110 West 43rd Ave Vancouver B.C. V6M 2E1

Phone number: 604-267-3970

A free and confidential service for youth and young adults up to the age of 24. Services include counselling, access to an addiction physician—including usage of a methadone maintenance program—and a drug education series.

AMS Food Bank:

ams.ubc.ca/services/food-bank/

If you are in a financial emergency AMS food bank can provide you with a food hamper. You are able to use the service up to 6 times each term.

UBC Psychology Clinic:

clinic.psych.ubc.ca

Professional psychological services provided to the community, including assessment & treatment for children, adults & families by clinical psychology trainees.

BC Crisis Center:

crisiscentre.bc.ca

Phone number: 604-872-3311

Non-profit, volunteer-driven organization that provides emotional support to youth, adults, and seniors in crisis in BC. Crisis line available 24/7.

Distress Line:

Phone number: 1-800-Suicide (784-2433)

If you are in distress or are worried about someone in distress who may hurt themselves, call 1-800-SUICIDE 24 hours a day to connect to a BC crisis line, without a wait or busy signal.