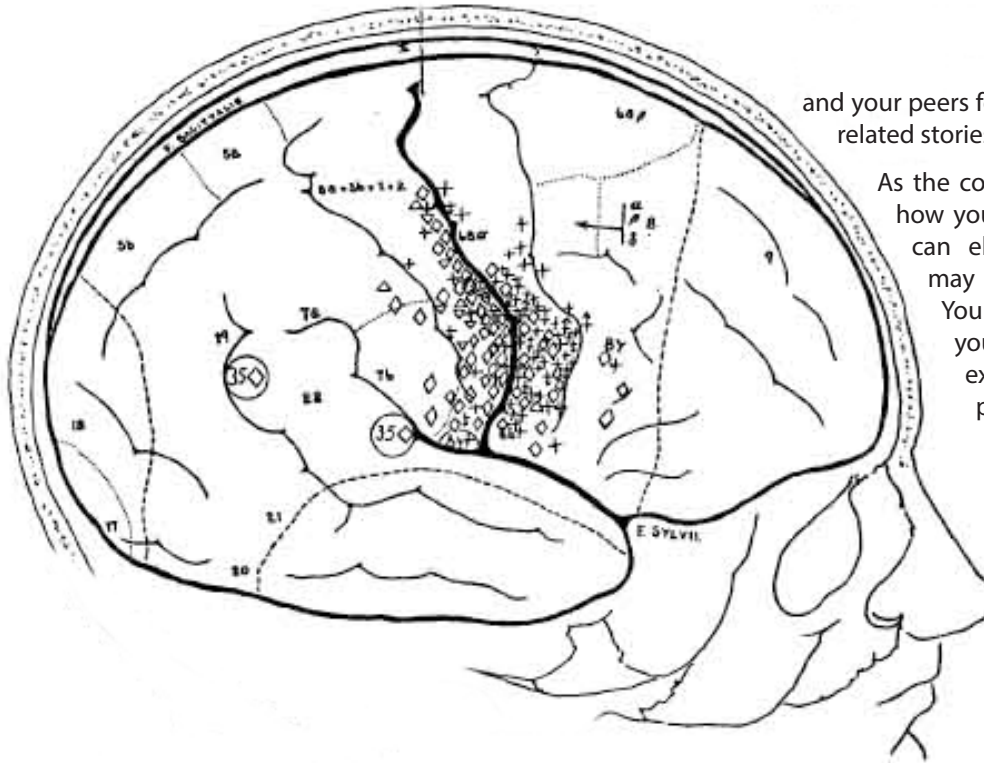


PSYC 301-902 (2024W2): BRAIN DYSFUNCTION & RECOVERY



and your peers feel comfortable sharing your course-related stories and opinions.

As the course progresses, please be aware of how you are managing. The course content can elicit emotions and memories that may be difficult to manage at times. You should feel free to reach out if you want to talk about anything, are experiencing distress, or need to pass over some course content that might retraumatize you or cause you distress. My hope is that I can guide you in your explorations of brain illness, brain damage, and other sorts of brain dysfunction. I do not want to induce brain dysfunction!

If you are struggling, there are many resources (e.g., students.ubc.ca/health, equity.ubc.ca/resources, students.ubc.ca/enrolment/academic-learning-resources) available to you here at UBC, in the Metro Vancouver area, and online. Explore them and see if they might assist your learning, your health, or other issues you might be dealing with. And if you find a great resource, please share it with the rest of us!

In this course, equal emphasis is placed on supporting your attainment of: (1) the foundational knowledge needed to successfully navigate and query the literatures related to nervous system injury, illness, degeneration, and diversity; and (2) the critical and creative thinking skills that will allow you to build on those foundations. But PSYC 301 is not merely academic: Much of what you learn will be readily applicable to your personal and professional lives.

My hope is that you will walk away from this course feeling comfortable:

- describing the neurobiological mechanisms, symptoms, assessment, and treatment of several neurological and psychiatric disorders.
- predicting the functional consequences arising from injury of different components of the central nervous system.
- identifying critical gaps in our understanding of the physiology and phenomenology of various sorts of brain dysfunction, and proposing methods for addressing those gaps.
- evaluating different methodologies, technologies, and tools for examining relationships between brain and

LAND ACKNOWLEDGMENT

This class is held on the UBC Vancouver campus, which is located on the traditional, ancestral, and unceded territory of the Musqueam people. We are mindful of our responsibility to reconciliation given our position on this stolen land, and are committed to upholding this responsibility with humility and openness to feedback. We also want to acknowledge that Indigenous communities have investigated and understood the workings of the brain long before the field of neuroscience, such as insights into the importance of relationality for learning, and the appreciation of the gifts of neurodiversity--to name only two.

WELCOME TO PSYC 301

What happens when an organ composed of roughly 150 billion neurons, glia, and other cell types, and the estimated 100 trillion connections amongst them, is subjected to trauma or illness? This course is about how the human brain can depart from typical functioning, as a function of inter-individual differences, as the outcome of brain injury, or as a result of illness.

The core of this course is the neurodiverse individual. Because they have taught neuroscience so much, in this course they are the teachers, and the rest of us their pupils (including researchers, healthcare practitioners, and me—Steven).

As we make our way through the term, please be mindful and respectful of everyone in our class and everyone who visits our class—both online and in-person. I would hope that you come to see our classroom as a safe and positive space—where you

behaviour.

- critically analyzing and interpreting pieces of primary and secondary literature on a specific type of nervous system injury or illness.

As a course, PSYC 301 can move pretty fast. To that end, I strongly recommend you attend our classroom time. Doing so should keep you on track with the course work. Not that attending class is the only thing you will need to do to succeed in this course. You will also need to participate in in-class activities, apply effective study strategies, and engage with the other course materials. If you are ever feeling lost with any of the course materials and assessments, please consider reaching out to me or your teaching assistant (TA)—see below.

WHAT? WHEN? WHERE? WHO?

PSYC 301 is a 3-credit course. There are several strongly recommended prerequisites for this course: Both of PSYC 101 and PSYC 102 (i.e., introductory psychology courses), and one of PSYC 216, PSYC 217, or 277 (i.e., an introductory research methods course). All of these courses are important for your understanding of the content in this course, but of particular relevance are the topics of: psychiatric conditions (PSYC 102), neuroanatomy (PSYC 101), and neurophysiology (PSYC 101). *Please note that you cannot receive credit for both PSYC 301 and NSCI 302—they are credit-excluded (but not equivalent).*

Class Time and Location

Thursdays, 5-7:30 pm

Buchanan (BUCH) Rm. A102

Course Website

We will be using [Canvas](#) (requires a CWL login) for a wide range of course-related activities, including the posting of lecture recordings (when possible) and to access Zoom-based office hours. (Please note that Canvas captures detailed usage data that I might examine for the purposes of improving this course.)

About Me - Steven Barnes (he/him)

My office hours: After class (when feasible), and also by appointment.

My email: sjb@psych.ubc.ca (Note that I only answer emails weekdays from 9-5; please give me 48 weekday hours before you hit a resend.)

Coffee chats: You are welcome to attend one of my offerings of a group chat and free beverage at Loafe cafe (in the Alumni centre). These will be held on different days throughout the term and usually in the late afternoon—if you wish to attend one of these, you must book a spot through your Canvas Calendar (make sure the PSYC_V 301-902 calendar is selected your list of calendars on the right side of the screen; you might need to clear your browser cache to see the available meeting times; I don't recommend booking through the Canvas mobile app).

I currently live in East Vancouver, which occupies the unceded ancestral lands of the Coast Salish Peoples, including the

Musqueam, Squamish, and Tsleil-Waututh Peoples.

I was born in Montreal, spent my teenage years in and around Toronto, and then moved to the Lower Mainland in the mid-90s to attend UBC as a BSc student. Following my bachelor's degree in Behavioural Neuroscience (known as "Biopsychology" at that time), I completed an MA and PhD, also in Behavioural Neuroscience at UBC. Then, I completed two postdoctoral fellowships: One in neurophysiology (University of Bonn) and one in computer programming and interactive art (Simon Fraser University).

*I am currently a Professor of Teaching in UBC's Department of Psychology. I am also the Director of the UPN, and co-lead of CREST. BD (see crestbd.ca). My interests lie in the visual arts (drawing and oil painting, interactive installations), the development of novel online technologies for learning and wellbeing (e.g., tapestry-tool.com, mytyde.ca), curriculum development, psychosocial interventions for bipolar disorder, science writing (e.g., *Biopsychology 9th to 11th Editions*), student mental health and wellbeing, and neuroscience. In neuroscience, some of the topics that excite me are: the neurophysiology of learning and memory, sleep & dreaming, and almost all the stuff in this course!*

About Your TA - Peiying Wen (she/her)

Peiying's office hours: By appointment

Email: psyc301@psych.ubc.ca

I am a second-year Masters student in Behavioural Neuroscience in both of the Snyder and NINET labs. I did my undergrad in Toronto where I worked with rodents on the topics of Alzheimer's Disease, memory circuits, and diet-induced impulsive behavior. My current research focuses on the effect of electroconvulsive therapy on memory and hippocampal function. I am happy to assist you with course content and answer any questions you might have related to doing research and/or graduate school.

Notes About Emails

- Please use psyc301@psych.ubc.ca for all non-confidential communication with Peiying. For confidential matters please contact me directly (sjb@psych.ubc.ca).*
- In most cases, email messages to psyc301@psych.ubc.ca will be answered within one or two weekdays, within the hours of 9-5. Please do not expect an email reply from us outside those times.*
- If you accidentally email Peiying with confidential information or inquiries she is not equipped to handle, she will likely forward your message to me, which might delay our response time.*
- If you have non-confidential content-related questions, please consider posting them to the Piazza discussion boards or searching the boards for an answer (as someone may have asked the same question and already received an answer). Using Piazza will be of greater benefit to your learning community than having an email exchange with me or Peiying (Note that I will not be participating on*

Piazza, for several reasons.)

- When you send us an email, please include the nature of your inquiry in the subject line, and your full name and student number in the body of your message.

COURSE MATERIALS

All course readings and videos will be made available to you on Canvas well in advance of the class you need to read them for. *There is no cost for the learning materials in this course.*

LECTURE RECORDINGS

Although I have requested that each class time be automatically recorded using the built-in recording system, I would strongly recommend against you relying on those recordings for several reasons. Here are two: (1) I can't guarantee a recording will even happen, or that the quality will be reasonable, as I have zero control over the built-in system; and (2) I might choose not to share a recording, or significantly edit it, if any personal information is shared in the classroom by anyone, including myself and guest speakers. Please understand that my primary motivation for recording class sessions is to support students who have an ongoing accommodation or have missed a class for some unavoidable reason.

COURSE ASSESSMENTS

There are three types of assessments in this course: (1) three exams; (2) one journal article response; and (3) a group research-grant-style project. Each assessment is described below, and also on Canvas (note that the descriptions on Canvas are more detailed).

1. Exams (up to 75%):

There are three exams in this course:

Midterm 1 (23%)	Thu Feb 6
Midterm 2 (26%)	Thu Mar 13
Final Exam (26%)	April Exam Period (Apr 12-17; 22-27)

Notes on the Exams:

- Exams are not cumulative. However, you should be aware that topics build off of each other across the course. Accordingly, it is unwise to omit any course materials from your studies.
- The two midterms will happen during class time. If you are late for class, you can either: (1) write the midterm in the remaining allotted time; or (2) request a concession (see below). The Final Exam will happen in April exam period.
- All exams will be written on paper.
- There will not be makeup exams or rewrites. If you miss Midterm 1 and receive a concession, the weight of Midterm 1 will be shifted evenly to Midterm 2 and the Final Exam. If you miss Midterm 2 and receive a concession, the weight of Midterm 2 will be shifted to the Final Exam. **If you miss**

both Midterms or the Final Exam, you will need to speak to your Faculty advising office.

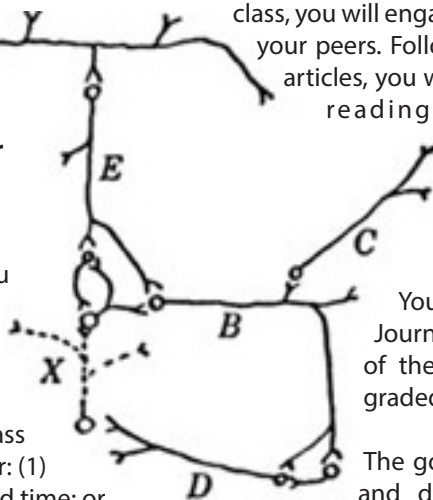
- You will not receive a concession for missing a midterm exam unless you [complete this survey within 48 hours](#) of missing that exam.
- There will be topics covered in lectures that are not in the readings and topics in the readings that are not covered in lectures. You will be responsible for both. *That is, all readings and all lecture materials are examinable.*
- All exams are composed of multiple-choice and short-answer questions.
- Details of the format of each exam will be presented in the class prior to each exam (see course schedule).
- Note that the instruction for all multiple-choice questions will be to "select the single best response."
- If you encounter what you believe to be a faulty question on an exam, please answer it to the best of your ability. Following each exam, I will review the results of each question, and sometimes the classes responses, to identify any problematic questions--those questions will not be included in the calculation of your exam grade.
- Once exams have been marked, grades will be posted on Canvas. You will receive an email notification when grades are posted (please ensure the University has your correct email address, and that you have notifications turned on in Canvas).
- You can review your Midterm exams with Peiyang. Please contact her at psyc301@psych.ubc.ca to arrange a time to view your exam.
- Any grading disputes (other than calculation errors) must be handled within 3 weeks of midterm exam grades being released.

2. One of Two Journal Article Responses (up to 10%)

Twice during the term, after reading an assigned article prior to class, you will engage in an in-class small group discussion with your peers. Following the discussion related to each of the articles, you will receive a prompt related to the assigned reading and in-class discussion, for which you must compose a written response to be submitted on Canvas the next day before 5 pm. A *Journal Article Response* that is submitted late will lose 10% per hour.

You should **only complete one** of the two Journal Article Responses—if you complete both of them, only the first one you submit will be graded.

The goal of this assignment is to promote critical and dynamic thinking about a prompt based on an assigned reading, in communication with peers. Note that you are expected to have completed the associated reading prior to this in-class activity. It is also highly recommended that you attend the lecture (or view it, should circumstances necessitate) on the day prior to the class in which you will be engaged in this activity, as that lecture will likely include background information that should help you digest the article and compose your written response.



Journal Article Discussions will happen on **Jan 23** and **Feb 27**, and the associated Journal Article Responses must be submitted **before 5 pm** on **Jan 24** and **Feb 28**, respectively.

3. “Unsolved Mystery” Research Proposal (group project; up to 15%)

During this course, you will encounter instances in class and in the readings, where a particular sort of neurodivergence is discussed for which researchers know very little about its mechanisms. For this project, you will work in a group of 4-5 to compose a research proposal about how we can better understand those mysterious mechanisms. This assignment should be no less than 8 pages (if you have a group size of 4) or 10 pages (if you have a group size of 5) single-spaced, not including your title page, reference section. The audience for this proposal is an individual who has a reasonably strong neuroscience background.

Project Proposal (penalty if submitted late)—due Jan 28 by 11:59 pm. The major purposes of the proposal are to: (1) ensure that your chosen topic aligns with the course; and (2) ensure that your proposed project is feasible; and (3) help you kick off the assignment. The list of requirements for this component of your project will be posted on Canvas well before the due date, as will the grading rubric. *Please note that submitting your proposal late will cost your team 1% of your final project grade per day.*

Final Project (up to 15% of course grade)—due Apr 3 by 11:59pm. The list of requirements for this component of your project will be posted to Canvas well in advance of the due date, as will the grading rubric to be used by Peiying. *Please note that late submissions will lose 10% per day.*

WITHDRAWAL DATES

If you wish to withdraw from this course without any record of the course on your transcript, you must do so on or before **Jan 17**. If you wish to withdraw with a “W” on your transcript, you must do so on or before **Mar 7**.

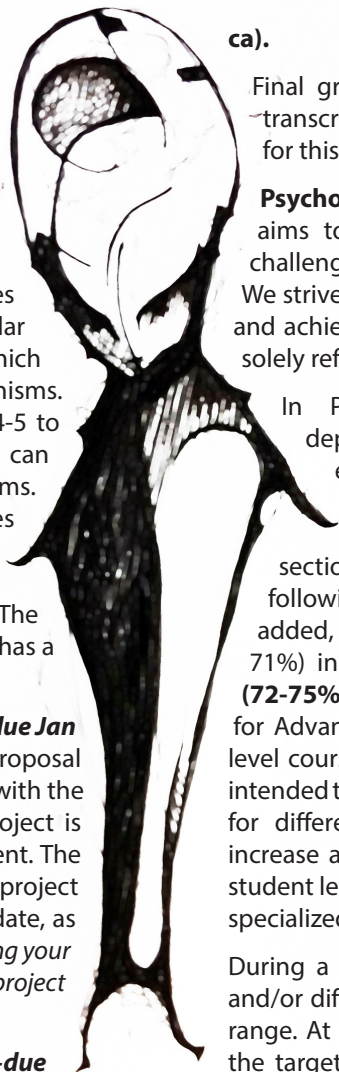
LEARNING & WELLNESS RESOURCES

Many different wellness resources are available at students.ubc.ca/health, as are directions for managing a crisis situation.

Learning resources are available on this UBC page: students.ubc.ca/enrolment/academic-learning-resources.

GRADING, CONCESSIONS, ACCESS

Grading. Your grade for each assessment will be posted on Canvas. **If you wish to inspect your midterm exams, you may do so by meeting with Peiying (psyc301@psych.ubc).**



ca).

Final grades are not official until they appear on your transcript. You will receive both a percent and a letter grade for this course.

Psychology Grading Policy. The Psychology Department aims to offer learning experiences that welcome and challenge students to engage meaningfully in our discipline. We strive for grades that accurately reflect student learning and achievement of course learning objectives, rather than solely reflecting their performance relative to others.

In Psychology at UBC Vancouver, we employ department-wide grading standards to promote equitable alignment, supporting students and course instructors as they learn and teach across diverse courses and sections. For each course section, instructors should aim for a grade average in the following target ranges (before any bonus HSP points are added, but including any mandatory HSP points): **B-** (68-71%) in Introductory 100-level and 200-level courses; **B (72-75%) in Intermediate 300-level courses**; **B+** (76-79%) for Advanced 400-level courses and Selective-Entry lower-level courses (e.g., 312, 370, 371, 349, 359, 365). Ranges are intended to provide some flexibility to instructors and account for differences that can occur between classes. Ranges increase across year levels to account for improvements in student learning, and students' ability to self-select into more specialized courses.

During a course, instructors may choose to adjust grades and/or difficulty of the assessments, to align with the target range. At the end of the course, if the average falls outside the target range (either direction), instructors are typically expected to use a linear transformation to adjust final grades (i.e., add or subtract the same number of points to all students' marks, while ensuring no student fails the course due to this transformation). If a course mean falls in within one +/- letter grade band above the target range (e.g., in the B+ range for Intermediate courses), and the instructor believes these grades to be justified, the instructor may submit a justification, and the grades may stand. This upper range is intended to inspire further excellence in learning and teaching, and allow for the possibility that some classes select for higher performing students.

Grades are not official until they appear on students' academic record. Students will receive both a percent and a letter grade for this course. At UBC, those convert as follows:

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

Academic Concessions. 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.

Academic Accommodations. The University accommodates students with disabilities who have registered with the Centre for Accessibility (see below), and students whose religious obligations conflict with attendance or scheduled exams. Please let us know in advance, preferably in the first few weeks of class, if you will require any accommodations on these grounds. Other absences (e.g., varsity athletics, family obligations or similar) are not part of University policy and you should not assume they will be accommodated.

OTHER COURSE POLICIES

Classroom Conduct. Our classroom (both online and in-person) 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.

Copyright. All course materials (e.g., handouts, lecture slides, assessments, readings, etc.) are the intellectual property of the course instructor or is other content that is permissible for use in this course. Redistribution of any course materials by any means without my permission will constitute a breach of copyright and may lead to academic discipline. **Please note that you are not permitted to record lectures and class activities on your own devices.**

Academic Integrity & Generative AI. The use of generative AI (e.g., ChatGPT) for the completion of the journal article response assignments and the group project is allowed, with the condition that you must include the prompt you used and the AI's output in a separate document and demonstrate how you fact-checked the information and how you used that information to build your knowledge. I recommend you use track changes and comments in Microsoft Word for this purpose. A simple copy-paste from an AI chatbot is not acceptable and will be considered academic misconduct (see below). **When using generative AI as a tool for your learning, please be transparent in your use.**

Centre for Accessibility. UBC is committed to equal opportunity in education for all students including those with disabilities. If you believe you fall in this category, please contact the Centre for Accessibility (students.ubc.ca/about-student-services/centre-for-accessibility) to take the necessary steps to ensure that you have every opportunity you deserve to excel in your studies.

Early Alert Program. I participate in the Early Alert program (see facultystaff.students.ubc.ca/systems-tools/early-alert/), to support students who are facing difficulties that are interfering with their education, their wellness, or both.

UNIVERSITY POLICIES

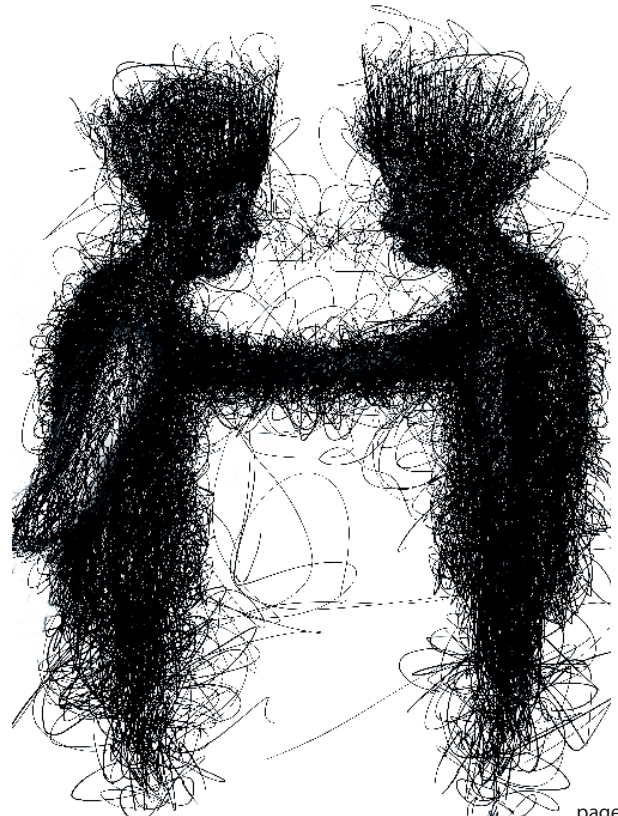
UBC provides resources to support student learning and to

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 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 on the [UBC Senate website](#).

ACADEMIC MISCONDUCT

Cheating, plagiarism, and other forms of academic misconduct are very serious concerns of the University and the UPN. 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 UBC President 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 the 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 what you are doing is even a borderline case of academic misconduct, please consult with me. For details on pertinent University policies and procedures, please [see the UBC Calendar](#).



COURSE SCHEDULE (subject to change; please check Canvas for current schedule)

Dates	Topic(s)	Readings, Videos (complete before class)	In-Class Activities	Notable Dates & Due Dates
Week 1 Thu Jan 9	<p>Introductions</p> <p>Course overview and expectations</p> <p>Syllabus Q&A</p> <p>Course Topic Requests</p> <p>Considerations related to our guest subject-matter experts</p>	<p>Neuroanatomy and Neurophysiology Modules (on Canvas)*</p> <p>*These modules are not examinable, but are highly recommended as the course content builds on these foundations.</p>		
Week 2 Thu Jan 16	<p>Neurodiversity</p> <p>Language Considerations</p>	<p>Bölte et al. (2023) article [also available on Canvas]</p>	<p>"Unsolved Mystery" Group Project: Group Formation</p>	<p>Jan 17: Last day to withdraw from the course without a withdrawal standing of W recorded on your transcript</p>
Week 3 Thu Jan 23	<p>Thinking Clearly About the Biology of Behaviour</p> <p>Forgotten Histories of Human Brain Control and Treatment</p>	<p>Streese et al. (2021) article [on Canvas]</p>	<p>Journal Article Discussion: Neurodiversity and Language (Bölte et al., 2023)</p>	<p>Jan 23: Journal Article Response 1 (prompt provided in-class, submit by Jan 24 (by 5 pm))</p>
Week 4 Thu Jan 30	<p>Guest Speaker: TBA (either Jan 30 or Feb 13)</p> <p>Case Studies, Lesions, and Neuroimaging Pt. 1</p> <p>Overview of Midterm 1</p>			<p>Jan 28: "Unsolved Mystery" Group Project Proposal due (by 11:59 pm)</p>
Week 5 Thu Feb 6	Midterm 1 (covers materials from weeks 1-4)			
Week 6 Thu Feb 13	<p>Guest Speaker: TBA (either Jan 30 or Feb 13)</p> <p>Neuroimaging Pt. 2</p>	<p>Hustvedt (2013) article [also available on Canvas]</p> <p>Loppato et al. (2017) article [on Canvas]</p>		
Week 7 Thu Feb 20	No Class: Midterm Break (Feb 17-21)			
Week 8 Thu Feb 27	<p>Defining 'Abnormal'</p> <p>Brain Injuries and Illnesses</p>		<p>Journal Article Discussion: The Psychological-Neurological Dichotomy in the Context of Epilepsy (Husvedt, 2013)</p>	<p>Feb 27: Journal Article Response 2 (prompt provided in-class, submit by Feb 28 (by 5 pm))</p>
Week 9 Thu Mar 6	<p>Guest Speaker: TBA (either Mar 6 or Mar 20)</p> <p>Epilepsy</p> <p>Overview of Midterm 2</p>			<p>Mar 7: Last day to withdraw from the course with a withdrawal standing of W recorded on your transcript</p>
Week 10 Thu Mar 13	Midterm 2 (covers materials from weeks 6-9)			
Week 11 Thu Mar 20	<p>Guest Speaker: TBA (either Mar 6 or Mar 20)</p> <p>Parkinson's Disease</p> <p>Alzheimer's Disease</p>			

Dates	Topic(s)	Readings, Videos (complete before class)	In-Class Activities	Notable Dates & Due Dates
Week 12 Thu Mar 27	Guest Speaker: TBA (either Mar 27 or Apr 3) Psychoses: Bipolar Disorders LSD			
Week 13 Thu Apr 3	Guest Speaker: TBA (either Mar 27 or Apr 3) Psychoses: Schizophrenia Marijuana & Schizophrenia Student-Chosen Topic (time permitting) Overview of Final Exam			Apr 3: "Unsolved Mystery" Group Project due (by 11:59 pm)
Apr 12-27 (excluding Apr 18-21; Sat and Sun included)	<p>April Exam Period*: Final Exam (covers materials from weeks 11-13)</p> <p>*please avoid booking flights etc. until you know the date of the final exam—which is set by UBC (not by me!).</p>			

