

PSYC 375-02		Brain and Behavior		Fall 2021	
Instructor:	Petronella (Petra) Hermann	Lecture Location:	Online (Zoom & D2L)		
Phone:	403-220-3573	Lecture Days/Time:	MWF 12:00-12:50		
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Office Hours:	Upon appointment; contact by email to schedule	Office Hours:	Upon appointment		

Course Description

The task of behavioural neuroscience is to explain behavior in terms of the activities of the brain. This course explores a wide variety of topics that may include the neural basis of learning, memory, sensation, and thinking, as well as behavioural and neurodegenerative disorders that arise from nervous system malfunction.

Course Learning Outcomes

The Department of Psychology is committed to student knowledge and skill development. The table below lists the key learning outcomes for this course, the program-learning outcomes they facilitate (see <https://live-arts.ucalgary.ca/psychology/about#program-learning-outcomes>), and the expected level of achievement.

Course Learning Outcomes	Assessment Methods	PLO(s)	Level(s)
Describe the major structures of the brain and explain their general function.	Exams, quizzes, online activities	1	I
Outline the basics of neural communication (neurotransmitters, the action potential, etc.).	Exams, quizzes, online activities	1	I
Illustrate the relationship between nervous system dysfunction and disease states (Alzheimer's disease, depression, etc.).	Exams, quizzes, online activities	1	I

Compare and contrast the usefulness of different species, techniques, and levels of analysis for studying brain and behavior.	Exams, quizzes, online activities	1,2,6	C,I
Critically evaluate information presented in the media regarding brain and behavior.	Media assignment	2,4,5,7	C,I

Notes. PLOs = Program-Learning Outcomes: 1 = demonstrate knowledge of psychological sciences, 2 = think critically and solve problems, 3 = conduct research and analyze data, 4 = communicate effectively, 5 = demonstrate information literacy, 6 = understand and implement ethical principles in a diverse world, 7 = apply psychological knowledge and skills, 8 = Demonstrate multicultural competence and awareness of issues related to equity, diversity,* and inclusion. Level of PLO achievement facilitated by this course: I = introductory, C = competency, A = advanced.

Acknowledgments and Respect for Diversity

Our classrooms view diversity of identity as a strength and resource. Your experiences and different perspectives are encouraged and add to a rich learning environment that fosters critical thought through respectful discussion and inclusion. The Department of Psychology would also like to acknowledge the traditional territories of the people of the Treaty 7 region in southern Alberta. The City of Calgary is also home to Métis Nation of Alberta, Region III.

Course Format

Lectures will be taught live via Zoom during each scheduled class as per the course schedule below and will be recorded and posted to D2L after class.

Prerequisites

Psyc 200 – Principles of Psychology

Required Text

An Introduction to Brain and Behaviour (6th Edition), B. Kolb, I.Q. Whishaw, and G.C. Teskey (2018), Worth Publishers. The text is available from the university bookstore and as an eBook.

Assessment Methods

Quizzes (3 total):	15%
Midterm #1	20%
Midterm #2	20%
Written Assignment	15%
Final Exam	30%

1. Quizzes (total 15%)

Quiz 1	Sep 17 th	5%
Quiz 2	Oct 18 th	5%
Quiz 3	Nov 17 th	5%

There will be 3 quizzes spaced throughout the course (Sep 17th, Oct 18th, Nov 17th); **each quiz is worth 5% of your final grade (15% total)**. The quizzes will be available on D2L for 24 hours starting at 11:59 am on the date scheduled to access but will have a limit of 30 minutes to complete once started (this is based on the 20 min plus 50% to allow for any technological issues). The quizzes will test you on the lecture material that has been covered since the last assessment and are designed to keep you up to date with the course material. Each quiz will consist of 5-10 multiple-choice, true/false, fill-in-the-blank, short answer, matching, or ordering questions. **Quizzes must be completed within the 24-hour window; failure to do so without instructor approval will result in a grade of zero.** Students with Academic Accommodations should contact me to make appropriate adjustments.

2. Exams (total 70%)

Midterm #1	Sep 29 th	20%
Midterm #2	Oct 29 th	20%
Final Exam	Exam Period, TBA	30%

There will be 3 exams spaced throughout the course; **midterms 1 & 2 (Sep 29th and Oct 29th) are worth 20% each and the final exam is worth 30% of your final grade (70% total)**. The exams will test you on the lecture material that has been covered in each section of the course. **Exams are not cumulative (except for chapter 7 which will be covered on all exams)**, but you may need to understand concepts from earlier in the course to answer questions on midterm 2 and the final exam. **The midterm exams will be available on D2L for 24 hours starting at 11:59 AM on the date scheduled to access but will have a limit of 75 minutes to complete once started** (this is based on the original 50 min class plus 50% to allow for any technological issues). The midterms will consist of approximately 45 multiple-choice, true/false, fill-in-the-blank, short answer (1-2 words), matching, or ordering questions.

The final exam will be scheduled by the registrar. It will consist of multiple choice and short answer (a few words to a few sentences) questions. **Without instructor approval, exams must be completed within the time window specified; failure to do so will result in a grade of zero.** Students with Academic Accommodations should contact me to make appropriate adjustments.

Exams in this course are closed book. The use of resources, including class notes, the textbook, online resources, and calculators is prohibited during the exams in this course. Students may not communicate with others about course material or the exam either in person or electronically during exams.

3. Written assignment (total 15%)

Media project	Nov 17 th	15%
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Your goal is to find and read a current news article describing research about the brain, and compare it to the original source, as well as relate it back to our discussion of brain and behaviour in the classroom. Further details regarding the assignment will be provided in class and posted on D2L. It is due by 11:59 PM on **November 17th** (handed in via the assignment dropbox in D2L) and is worth 15% of your final grade. Late papers will not be accepted without approved documentation. The written assignment should be two pages in length (not including the reference section or title page). There are no marks for

formatting or style, instead we are interested in your assessment of the media and scientific articles. Excellent sources to help you find media stories include major media outlets such as <http://cbc.ca> and <http://npr.org> as well as science digest sites such as <https://www.biopsychology.com/news/>. Do not use science digest sites as the media story, rather find the mainstream media article they link to.

University of Calgary Academic Integrity Policy

Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. We expect members of our community to act with integrity.

Research integrity, ethics, and principles of conduct are key to academic integrity. Members of our campus community are required to abide by our institutional code of conduct and promote academic integrity in upholding the University of Calgary's reputation of excellence. It is your responsibility to ensure that you have read and are familiar with the student academic misconduct policy: <https://www.ucalgary.ca/policies/files/policies/student-academic-misconduct-policy.pdf>.

Department of Psychology Criteria for Letter Grades

Psychology course instructors use the following criteria when assigning letter grades:

A+ grade: *Exceptional Performance.* An A+ grade indicates near perfect performance on multiple choice and short answer exams. For research papers/essays/course projects/presentations, an A+ grade is awarded for exceptional work deserving of special recognition and is therefore not a common grade.

A, A- Range: *Excellent Performance.* Superior understanding of course material. Written work is very strong in terms of critical and original thinking, content, organization, and the expression of ideas, and demonstrates student's thorough knowledge of subject matter.

B Range: *Good Performance.* Above average understanding of course material. Written work shows evidence of critical thinking and attention to organization and editing but could be improved in form and/or content.

C Range: *Satisfactory Performance.* Adequate understanding of course material. Knowledge of basic concepts and terminology is demonstrated. Written work is satisfactory and meets essential requirements but could be improved significantly in form and content. Note: All prerequisites for courses offered by the Faculty of Arts must be met with a minimum grade of C-.

D range: *Marginally meets standards.* Minimal understanding of subject matter. Written work is marginally acceptable and meets basic requirements but requires substantial improvements in form and content. Student has not mastered course material at a level sufficient for advancement into more senior courses in the same or related subjects.

F grade: *Course standards not met.* Inadequate understanding of subject matter. Written work does not meet basic requirements. Student has not demonstrated knowledge of course material at a level sufficient for course credit.

Grading Scale

A+	96-100%	B+	80-84%	C+	67-71%	D+	54-58%
A	90-95%	B	76-79%	C	63-66%	D	50-53%
A-	85-89%	B-	72-75%	C-	59-62%	F	0-49%

It is at the instructor's discretion to round off either upward or downward to determine a final grade when the average of term work and final examinations is between two letter grades. To determine final letter grades, final percentage grades will be rounded up or down to the nearest whole percentage (e.g., 89.5% will be rounded up to 90% = A but 89.4% will be rounded down to 89% = A-).

Tentative Lecture Schedule

Date	Lecture topic	Assessment	Readings
W Sep 8	Introduction to Brain, Behaviour, and Evolution		Chapter 1,7
F Sep 10	Introduction to Brain, Behaviour, and Evolution		Chapter 1
M Sep 13	Introduction to Brain, Behaviour, and Evolution Neuroanatomy		Chapter 1 Chapter 2
W Sep 15	Neuroanatomy		Chapter 2
R Sep 16	<i>Last day to drop a class without a penalty.</i>		
F Sep 17	Neuroanatomy	Quiz 1	Chapter 2
F Sep 17	<i>Last day to add or swap a course.</i>		
M Sep 20	Neuroanatomy Cells of the nervous system		Chapter 2 Chapter 3
W Sep 22	Cells of the nervous system		Chapter 3
F Sep 24	Cells of the nervous system		Chapter 3
F Sep 24	<i>Fee payment deadline for full and half courses.</i>		
M Sep 27	Cells of the nervous system		Chapter 3
W Sep 29		Midterm exam 1	
F Oct 1	How neurons communicate		Chapter 4,7
M Oct 4	How neurons communicate		Chapter 4,7

W Oct 6	How neurons communicate		Chapter 4
F Oct 8	How neurons communicate		Chapter 5
M Oct 11	<i>Thanksgiving Day, University closed. No lectures.</i>		
W Oct 13	How neurons communicate		Chapter 5
F Oct 15	How neurons communicate		Chapter 5
M Oct 18	How neurons communicate	Quiz 2	Chapter 5
W Oct 20	Drugs and hormones		Chapter 6
F Oct 22	Drugs and hormones		Chapter 6
M Oct 25	Drugs and hormones		Chapter 6
W Oct 27	Drugs and hormones		Chapter 6
F Oct 29		Midterm exam 2	
M Nov 1	Sensation and perception		Chapter 9, 7
W Nov 3	Sensation and perception		Chapter 9, 7
F Nov 5	Sensation and perception		Chapter 9
Nov 7-13	<i>Term Break. No Classes</i>		
R Nov 11	<i>Remembrance Day (Observed). No lectures.</i>		
M Nov 15	Sensation and perception		Chapter 9, 10
W Nov 17	Sensation and perception	Quiz 3	Chapter 10
F Nov 19	Movement		Chapter 11
M Nov 22	Movement	Written assignment due	Chapter 11
W Nov 24	Movement		Chapter 11
F Nov 26	Sleep and rhythms		Chapter 13
M Nov 29	Sleep and rhythms		Chapter 13
W Dec 1	Learning and memory		Chapter 14
F Dec 3	Learning and memory		Chapter 14
M Dec 6	Learning and memory		Chapter 14
W Dec 8	Review and Q&A session		

R Dec 9	<i>Fall Term Lectures End. Last day to withdraw with permission from Fall Term half courses</i>		
Dec 13-22	<i>Fall Final Exam Period</i>	Final exam	

Extra Research Participation Course Credit is Not Offered for this Course.

Absence From a Test/Exam/Quiz

Makeup tests/exams are **NOT** an option without the approval of the instructor. Students who miss a test/exam have up to 48 hours to contact the instructor to ask for a makeup test/exam. It's the instructor's discretion if they will allow a make-up exam. Students who do not schedule a makeup test/exam with the instructor within this 48-hour period forfeit the right to a makeup test/exam. At the instructor's discretion, a makeup test/exam may differ significantly (in form and/or content) from a regularly scheduled test/exam. Once approved by the instructor a makeup test/exam must be written within 2 weeks of the missed test/exam on a day/time scheduled by the instructor. If a student cannot write their final exam on the date assigned by the Registrar's Office, they need to apply for a deferred exam <https://www.ucalgary.ca/registrar/exams/deferred-exams>.

Travel During Exams

Consistent with University regulations, students are expected to be available to write scheduled exams at any time during the official December and April examination periods. Requests to write a make-up exam because of conflicting travel plans (e.g., flight bookings) will NOT be considered by the department. Students are advised to wait until the final examination schedule is posted before making any travel arrangements. If a student cannot write their final exam on the date assigned by the Registrar's Office, they need to apply for a deferred exam <https://www.ucalgary.ca/registrar/exams/deferred-exams>. Students with an exceptional extenuating circumstance (e.g., a family emergency) should contact the Department of Psychology (psyugrd@ucalgary.ca).

Reappraisal of Graded Term Work <http://www.ucalgary.ca/pubs/calendar/current/i-2.html>

Reappraisal of Final Grade <http://www.ucalgary.ca/pubs/calendar/current/i-3.html>

Academic Accommodations

Students seeking an accommodation based on disability or medical concerns should contact Student Accessibility Services; SAS will process the request and issue letters of accommodation to instructors. For additional information on support services and accommodations for students with disabilities, visit www.ucalgary.ca/access/. Students who require an accommodation in relation to their coursework based on a protected ground other than disability should communicate this need in writing to their Instructor. The full policy on Student Accommodations is available at <https://www.ucalgary.ca/legal-services/university-policies-procedures/accommodation-students-disabilities-procedure>.

Academic Misconduct

For information on academic misconduct and its consequences, please see the University of Calgary Calendar at <http://www.ucalgary.ca/pubs/calendar/current/k.html>

Instructor Intellectual Property

Course materials created by professor(s) (including course outlines, presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the professor(s). These materials may NOT be reproduced, redistributed or copied without the explicit consent of the professor. The posting of course materials to third party websites such as note-sharing sites without permission is prohibited. Sharing of extracts of these course materials with other students enrolled in the course at the same time may be allowed under fair dealing.

Copyright Legislation

All students are required to read the University of Calgary policy on Acceptable Use of Material Protected by Copyright (www.ucalgary.ca/policies/files/policies/acceptable-use-of-material-protected-by-copyright.pdf) and requirements of the copyright act (<https://laws-lois.justice.gc.ca/eng/acts/C-42/index.html>) to ensure they are aware of the consequences of unauthorized sharing of course materials (including instructor notes, electronic versions of textbooks etc.). Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy.

Freedom OF Information and Protection of Privacy

Student information will be collected in accordance with typical (or usual) classroom practice. Students' assignments will be accessible only by the authorized course faculty. Private information related to the individual student is treated with the utmost regard by the faculty at the University of Calgary

Student Support and Resources

<https://www.ucalgary.ca/registrar/registration/course-outlines>

Important Dates

The last day to drop this course with no "W" notation and **still receive a tuition fee refund** is **Thursday, September 16, 2021**. Last day add/swap a course is **Friday, September 17, 2021**. The last day to withdraw from this course is **Thursday, December 9, 2021**.

<https://www.ucalgary.ca/pubs/calendar/current/academic-schedule.html>