

PSYC/NEUR 479-01
Human Neuropsychology
Winter 2024

Instructor:	Dr. Nichole Flynn	Lecture Location:	SH 274
Phone:		Lecture Days/Time:	TR 9:30am – 10:45am
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Office Hours:	By appointment		

Course Description

The purpose of this course is to study the functional organization of the neocortex and the cortical lobes, especially in understanding the structure and connectivity of the human brain. Both human and nonhuman studies are discussed, as well as neuropsychological assessment in patients with focal brain injuries and disorders.

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)
Identification of major brain structures and their general function	Multiple choice exams	1, 2	C, C
Demonstrate an understanding of the organization of the neocortex and principles of neocortical function	Multiple choice exams	1, 2	C, C
Demonstrate an understanding of the functional organization of the cortical lobes and their networks	Multiple choice exams	1, 2	C, C
Compare and contrast neuropsychological tasks used in the evaluation of patients with brain injury and disorders	Multiple choice exams	1, 2	I, I
Critically evaluate the neuropsychological literature as it pertains to a particular brain structure and disorder of interest	Written assignment (literature review)	2, 4, 5, 7	C, C, C, C

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

This is an in-person class held on campus.

Prerequisites

PSYC 300 (Research methods and data analysis in psychology I)

PSYC 301 (Research methods and data analysis in psychology II)

PSYC 375 (Brain and Behaviour)

Required Text

Fundamentals of Human Neuropsychology (8th Edition), B. Kolb, and I.Q. Whishaw (2021), Worth Publishers. The text is available from the university bookstore.

Assessment Methods

<u>Midterm 1:</u> Feb. 6 (In class).	25%
<u>Midterm 2:</u> Mar. 14 (In class).	25%
<u>Written Assignment:</u> Due by 11pm on Mar. 28 (via D2L Dropbox).	15%
<u>Final Exam (Cumulative):</u> Registrar-scheduled	35%

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.

Exam Procedure:

- Absolutely no electronic devices allowed at your seat or on your person
- Writing implements, ID card, water bottles at desk only
- If a student arrives 15+ minutes late, the student will not be permitted to write the exam and will receive a grade of 0
- All students must stop writing when time is up or their exam will not be marked, receiving a grade of zero
- No student is permitted to leave within last 15 min of exam to limit disruptions

All exams will be multiple choice. Midterms 1 and 2 will be held during regular class time. Only material covered in lecture will be tested. The cumulative final exam is registrar-scheduled.

Without instructor approval, late assignments will be penalized 10% per day, including weekends.

The written assignment must be no longer than ten pages in length (not including the reference section or title page) and formatted according to APA guidelines. The assignment is worth 10% of the final grade and is **due by 11:00pm on Mar. 28** (handed in via the assignment dropbox in D2L). The student's goal is to write a literature review pertaining to a specific brain structure and its role in a neuropsychological disorder of interest. **Literature review topics must be submitted to the TA (Cc instructor) in advance, by 11:00pm on Feb. 29 at the latest.** Late topic submissions will result in a 1-point grade deduction from

the written assignment. Failure to submit a topic for approval will result in a 2-point grade deduction from the written assignment. Further details regarding the assignment will be provided in class and posted on D2L.

Once approved by the course instructor, and at their discretion, alternative arrangements for missed assessments may be considered <https://www.ucalgary.ca/pubs/calendar/current/g-1-2.html>. Students may be asked for documentation <https://www.ucalgary.ca/pubs/calendar/current/m-1.html>. The instructor must be notified within 48 hours of any missed assessment. If the instructor is contacted beyond this 48 hour window, the student will receive a grade of zero on the missed assessment.

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/legal-services/sites/default/files/teams/1/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	Topic	Readings
T Jan 9	<p>First day of lectures</p> <p>Background – Intro to Neuropsychology.</p> <ul style="list-style-type: none"> Review of the functional organization of the nervous system and neuronal communication 	<p>Note: <u>Chapters 1-9</u> are considered pre-requisite knowledge for this course. Please take time to do additional reading if required. We only have time to review some concepts.</p> <p><u>Lectures from Jan. 9 – Jan. 18 will focus on:</u></p> <p>Ch. 1: p. 2-4, p. 7-16</p> <p>Ch. 3: p. 50-54, p. 57-58, p. 60-61, p. 63-75</p> <p>Ch. 4: p. 81, p. 88-89, p. 93-104</p> <p>Ch. 5: p. 110-114, 117-127</p>
R Jan 11	<p>Background – Intro to Neuropsychology.</p> <ul style="list-style-type: none"> Review of the functional organization of the nervous system and neuronal communication 	
T Jan 16	<p>Background – Intro to Neuropsychology.</p> <p>Review of the functional organization of the nervous system and neuronal communication</p>	

R Jan 18	Last day to drop a class without financial penalty Background – Intro to Neuropsychology. Review of the functional organization of the nervous system and neuronal communication	
F Jan 19	Last day to add or swap a course	
T Jan 23	Functional organization of the neocortex	<u>Ch. 10 – 12</u> Ch. 10: p. 238-251, p. 252-260 Ch. 11: p. 262-265, p. 268-279 Ch. 12: p. 292-296, p. 300-306, p. 309-312
R Jan 25	Functional organization of the neocortex	
F Jan 26	Fee payment deadline for Winter Term full and half courses.	
T Jan 30	Functional organization of the neocortex	
R Feb 1	Functional organization of the neocortex	
T Feb 6	MIDTERM 1. In class. 9:35am – 10:35am pm (60 min)	Material covered will be posted on D2L prior to exam
R Feb 8	Functional organization of the neocortex	
T Feb 13	Cortical lobes and networks	<u>Ch. 13 – 16</u> Ch. 13 (Occipital): p. 322 – 340 Ch. 14 (Parietal): p. 345-349, p. 354-360 Ch. 15 (Temporal): p. 370-376, p. 380, p. 384, p.386-391 Ch. 16 (Frontal): p. 395-402, p. 404-418
R Feb 15	Cortical lobes and networks	
Feb 18-24	Term Break, no classes	
T Feb 27	Discuss written assignment	Material to be posted on D2L
R Feb 29	Cortical lobes and networks Literature review topics must be submitted by 11:00pm today to avoid penalty	

T Mar 5	Cortical lobes and networks	
R Mar 7	Cortical lobes and networks	
T Mar 12	Cortical lobes and networks	
R Mar 14	MIDTERM 2. In class. 9:35am – 10:35 am (60 min)	Material covered will be posted on D2L prior to exam
T Mar 19	Cortical lobes and networks	
R Mar 21	Learning and Memory	Ch. 18: p.443-463
T Mar 26	Learning and Memory	
R Mar 28	Spatial Behaviour Written assignment due by 11:00 pm (hand in via D2L dropbox)	Ch. 21: p. 528-538, p. 545-548
T Apr 2	Neurodevelopmental Disorders	Ch. 24: p. 615-630, p. 638-641 Ch. 19: p. 483-485 (Fig 19.9)
R Apr 4	Neurodevelopmental Disorders	
T Apr 9	Winter Term Lectures End. Last day to withdraw with permission from Fall Term half courses. Flex day. Finish course material if needed, and/or office hours	
Apr 12-23	Winter Final Exam Period	

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

Seating During Exams

Instructors and exam invigilators are free to ask students to move seats before an exam begins or even during an exam. Students must comply with this request and refusal to do so may warrant a charge of academic misconduct

Absence From Test/Exam

Makeup tests/exams are **NOT** an option without the approval of the instructor

<https://www.ucalgary.ca/pubs/calendar/current/g-1-1.html> 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 [Deferred Final Exams | University of Calgary \(ucalgary.ca\)](#) 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/sites/default/files/teams/1/Policies-Student-Accommodation-Policy.pdf>.

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 (https://library.ucalgary.ca/services/copyright?_gl=1*bcjlpn*_ga*OTY1ODc0Njg0LjE2NjkxNTA1NTM.*_ga_X4GN9Y4W7D*MTY3Nzc5MjM3Ni4xNy4xLjE2Nzc3OTI4MDYuMC4wLjA) 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, January 18th, 2024**. Last day add/swap a course is **Friday, January 19th, 2024**. The last day to withdraw from this course is **Tuesday, April 9th, 2024**.