

Psychology 620.1

Brain Plasticity and Neurorehabilitation

Fall 2015

Instructor:	Andrea Protzner	Lecture Location:	EDC 286
Phone:	403-220-5566	Lecture Days/Time:	M 12:00 to 14:45
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Office:	AD 153A		
Office Hours:	By appointment.		

Course Description and Goals

An important development in the area of neuroscience has been the demonstration that the brain has the capacity for experience-dependent change. This course will be an overview of brain plasticity and neurorehabilitation. You will learn about plasticity in both normal and diseased brains. We will discuss models, theories, and outcomes in the context of language, memory, executive function, ageing, and disease.

Required Text

None required. Readings will be pre-selected articles available through the University of Calgary Library Electronic resources.

Evaluation

A. Article Leading (4 x 10% = 40%). You will lead the discussion of 4 articles. Your goal is to not simply summarize the articles, but to create interest and discussion. You can also integrate people's thought questions with your own ideas and questions. Guide us through key issues and some examples of relevant research without rushing or cutting off useful discussion.

B. Research Proposal (30%). You will write a 10 - 15 page APA-formatted research proposal based (ideally) on a topic covered in one of the articles. Your goal is to come up with one or more experiments that you would like to carry out and that would make an important and original contribution to the literature on that topic. The proposal should include the following labeled sections: abstract, literature review, proposal, method, analyses, predictions, implications, and references.

C. Proposal Presentation (10%). You will present your proposal to us (possibly using PowerPoint) and will answer our questions.

D. Thought Questions (10%). You will post a thought question prior to each readings-based class on D2L. Your goal is to post an issue, criticism, or stimulating thought related to that week's readings. You must post it no later than 10 pm the night before class. Be sure to read everyone's thought questions before coming to class.

E. Seminar Participation (10%). You are expected to contribute to discussions during each readings-based class.

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%

As stated in the University Calendar, 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-).

Important dates [Fall 2015]

Date	
T Sep 8	Lecture begins.
F Sep 18	Last day to drop full courses (Multi-term) and Fall Term half courses. No refunds for full courses (Multi-term) or Fall Term half courses after this date.
M Sep 21	Last day to add or swap full courses (Multi-term) and Fall Term half courses. Last day for change of registration from audit to credit or credit to audit.
Nov 11-15	Reading Days. No lectures.
W Nov 11	Remembrance Day (Observed). University Closed (except Taylor Family Digital Library, Law, Medical, Gallagher and Business Libraries). No lectures.
T Dec 8	Fall Term Lectures End. Last day to withdraw with permission from Fall Term half courses.

Tentative Seminar Schedule

Date	Topic/Activity/Readings/Due Date
M Sep14	Introduction
M Sep 28	Assessment of brain change: microstructure and system neuroimaging, behavioural and population neuroscience
M Oct 5	Mechanisms of brain change: system-level training, focal stimulation, systemic neurodegeneration, top-down cross-system changes
M Oct 12	Thanksgiving Day, University closed (except Taylor Family Digital Library, Law, Medical, Gallagher and Business Libraries). No lectures.
M Oct 19	No Class (I will be away at the Society for Neuroscience Conference.)
M Oct 26	Cortical plasticity across the lifespan
M Nov 2	Physiological interventions: neurofeedback, pharmacology and neuromodulation
M Nov 9	Behavioural interventions: computerized, mindfulness, music, and occupation
M Nov 16	Neurorehabilitation of specific cognitive functions: Memory
M Nov 23	Neurorehabilitation of specific cognitive functions: Language
M Nov 30	Neurorehabilitation of specific cognitive functions: Executive function
M Dec 7	Compensatory and restorative approaches to rehabilitation

Reappraisal of Grades

A student who feels that a piece of graded term work (e.g., term paper, essay, test) has been unfairly graded, may have the work re-graded as follows. The student shall discuss the work with the instructor within 15 days of being notified about the mark or of the item's return to the class; no reappraisal of term work is permitted after the 15 days. If not satisfied, the student shall immediately take the matter

to the Head of the department offering the course, who will arrange for a reassessment of the work within the next 15 days. The reappraisal of term work may cause the grade to be raised, lowered, or to remain the same. If the student is not satisfied with the decision and wishes to appeal, the student shall address a letter of appeal to the Dean of the faculty offering the course within 15 days of the unfavourable decision. In the letter, the student must clearly and fully state the decision being appealed, the grounds for appeal, and the remedies being sought, along with any special circumstances that warrant an appeal of the reappraisal. The student should include as much written documentation as possible.

Plagiarism and Other Academic Misconduct

Intellectual honesty is the cornerstone of the development and acquisition of knowledge and requires that the contribution of others be acknowledged. Consequently, plagiarism or cheating on any assignment is regarded as an extremely serious academic offense. Plagiarism involves submitting or presenting work in a course as if it were the student's own work done expressly for that particular course when, in fact, it is not. Students should examine sections of the University Calendar that present a Statement of Intellectual honesty and definitions and penalties associated with Plagiarism/Cheating/Other Academic Misconduct.

Academic Accommodation

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 http://www.ucalgary.ca/policies/files/policies/student-accommodation-policy_0.pdf.

Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation. You are also required to discuss your needs with your instructor no later than 14 days after the start of this course.

Absence From A Test/Exam

Makeup tests/exams are **NOT** an option without an official University medical excuse (see the University Calendar). A completed Physician/Counselor Statement will be required to confirm absence from a test/exam for health reasons; the student will be required to pay any cost associated with this Statement. Students who miss a test/exam have up to 48 hours to contact the instructor and to schedule a makeup test/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. Except in extenuating circumstances (documented by an official University medical excuse), a makeup test/exam must be written within 2 weeks of the missed test/exam during exam make-up hours provided by the department <http://psychology.ucalgary.ca/undergraduate/exam-and-course-information#mues>.

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. Under no circumstances will this be accommodated by the department.**

Freedom of Information and Protection of Privacy (FOIP) Act

The FOIP legislation disallows the practice of having student's retrieve tests and assignments from a public place. Therefore, tests and assignments may be returned to students during class/lab, or during office hours, or via the Department Office (Admin 275), or will be made available only for viewing during exam review sessions scheduled by the Department. Tests and assignments will be shredded after one year. Instructors should take care to not link students' names with their grades, UCIDs, or other FOIP-sensitive information.

Evacuation Assembly Point

In case of an emergency evacuation during class, students must gather at the designated assembly point nearest to the classroom. The list of assembly points is found at <http://www.ucalgary.ca/emergencyplan/assemblypoints>
Please check this website and note the nearest assembly point for this course.

Student Ombudsman's Office

The Office of the Student Ombudsmen provides independent, impartial and confidential support for students who require assistance and advice in addressing issues and concerns related to their academic careers. The office can be reached at 403-220-6420 or ombuds@ucalgary.ca
(<http://www.ucalgary.ca/provost/students/ombuds>)

Safewalk

The safewalk program provides volunteers to walk students safely to their destination anywhere on campus. This service is free and available 24 hrs/day, 365 days a year.
Call 403-220-5333.

Important Dates

The last day to drop this course with no "W" notation and **still receive a tuition fee refund is September 18, 2015.** Last day for registration/change of registration is **September 21, 2015.** The last day to withdraw from this course is **December 8, 2015.**