



Psych/Neuro 521 (L01)

Cognitive & Clinical Neuroscience

Winter 2017

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Office Hours: Anytime – but email first

Lecture Location: SS 06
Lecture Days/Time: M 16:00 – 18.45

Course Description and Goals

The course provides an overview of the latest research investigating brain mechanisms underlying some of the cutting-edge topics in cognitive neuroscience. At the outset, students will be introduced to basic concepts of cognitive neuroscience and the range of techniques used with both healthy subjects and clinical populations. In subsequent weeks, classes will consist of detailed introductions to specific topics, student presentations and class discussion of scientific literature. The goal is for students to acquire knowledge about cognitive and clinical neuroscience through selected topics and to develop critical thinking skills when evaluating scientific literature.

Prerequisites

Psyc 312 (Experimental Design & Quantitative Method) and Psyc 375 (Brain and Behaviour).

Required Text

There are no required textbooks for this course. The course material consists of selected articles that will be made available to students throughout the course.

Students who would like to have additional basic knowledge in Cognitive Neuroscience should consider purchasing the following text: Gazzaniga, M.S., Ivry, R. B., Mangun, J.R. (2013). *Cognitive Neuroscience: The Biology of the Mind* (4thEd.). New York, NY: W. W. Norton & Company.

Evaluation

Student evaluations will be based on one presentation (20% of final grade) and one leading discussion (20% of final grade), prepared questions for class discussion (10% of final grade), and one term paper (40% of final grade); students' participation in class discussion throughout the course will account for 10% of the final grade. Missed or late assignments will receive 0% unless documented by an official University medical excuse. Important, at the end of the assignment (i.e., presentation and leading discussion), students will receive a comprehensive feedback aiming to improve their skills and highlight their strengths, followed by a general letter grade range (i.e., range A, range B, range C, etc.). At the end of the course students will receive exact percent grades received at each individual assignment.

A. Presentation (20% of final grade). During the first week, students will be asked to select a date (and, accordingly, a topic as scheduled in the course outline) for delivering their presentation. Students will present individually or in groups depending on class size, and assigned at random if the number of dates and topics chosen voluntarily do not cover the entire course schedule. Students may be asked to present twice, in which case only the second presentation will be graded (as the first presentation will be considered a practicing one). The presentation should be in the format of PowerPoint slides and examine in detail one peer-reviewed journal article; the article will be related to the topic of the week.

The length of each presentation will be approximately 20-30 minutes but it may vary depending on the number of students attending the course, and the ability of students to generate discussion on the topic. As a guideline, each presentation should include: (1) a brief overview of the subject of the article, (2) the main question that the article aims to address, the relevance of it in the context of the topic of the week, and the authors' hypothesis, (3) a detailed description of the methods and procedure used, (4) the results of the study, (5) the authors' interpretation of the results, (6) the authors' general conclusion, (7) the student's observations about the study (including merits and/or limits of the experimental approach used), and (8) the student's suggestions for future studies given the findings provided in the article.

Students are encouraged to read additional research as needed and/or to prepare material (such as handouts or prepared questions) in order to engage the class and stimulate relevant discussion. In order to actively participate in the discussion, students attending are required to read the article presented as well as additional material related to that topic in advance of the class. Evaluation is based on creativity and success in engaging colleagues' participation in class discussion, clarity, accuracy and completeness of the presentation.

B. Leading discussion (20% of final grade). The format of the leading discussion is similar to the presentation with the exception that there will be no slides to be presented to the class. Students will be asked to select a date (and accordingly a topic according to the course schedule) for discussing a given article. Students will outline the content of the article and prepare questions to stimulate class discussion. Leading discussion may occur individually or in groups depending on class size, and assigned at random if the number of dates and topics chosen voluntarily do not cover the entire course schedule. Evaluation is based on creativity and success in engaging colleagues' participation in class discussion, clarity, accuracy and completeness of the presentation.

C. Questions (10% of final grade). Twenty-four hours prior to each class, students are expected to post on the online discussion forum one question related to the material (scientific articles) that will be discussed/presented during the class on the next day. The questions are made available to everyone for discussion during the class. Evaluation is based on the quality of the questions submitted throughout the course, with a maximum score of 1% for each topic question posted (there will be a total of 10 topic questions that may be posted).

D. Term paper (40% of final grade). Each student will write a term paper consisting of a research proposal. The proposal can focus only on a topic covered during the course. The topic chosen for the proposal can be the same as that chosen (or assigned) by the student for his/her presentation/discussion. In the proposal, students are required to formulate one or two experiments that would make an original contribution to the literature/topic that the proposal focuses on. Topics must be pre-approved by the instructor and proposals (in PDF format) will be submitted by email to the instructor no later than the last class of the course. Importantly, the paper must include human studies and must have a neuro-component.

The content of the paper must be organized into the following sub-headings: (1) Title, (2) Abstract (150 words maximum), (3) Topic/literature overview, (4) Proposal, (5) Methods, (6) Expected results, (7) Implications and conclusions, (8) References (minimum 10). The body of the paper (excluding title page and reference list) must not exceed five pages (double-spaced, 12 pt Times font). No figures or tables should be included in the paper. Evaluation is based on clarity, accuracy and completeness. Special consideration will be given to the originality of the proposal. Students who do not comply with the guidelines described above will have 5% deducted from the term paper's grade.

Department of Psychology Grade Distribution Policy

The distribution of grades in Psychology courses (the percentage of A grades, B grades, etc.) will be similar to the distribution of grades in other courses in the Faculty of Arts. The Department monitors the

grade distributions of 200-, 300-, and 400-level courses in the Faculty to ensure that the grade distributions in Psychology courses are comparable. Based on these reviews, students can expect that 1) up to 30% of grades in 200- and 300-level psychology courses will be "A" grades (A+, A, and A-), and 2) up to 40% of grades 400-level psychology courses will be "A" grades.

Department of Psychology Criteria for Letter Grades

Psychology professors 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%

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-).

Tentative Lecture Schedule

Date	Topic – Reading material will be provided in blackboard
M Jan 9	Introduction to the course.
M Jan 16	Methodology – Performing neuroimaging studies
F Jan 20	Last day to drop Winter Term half-course.
M Jan 23	Introduction to PubMed and research of articles for presentations/discussions

	Last day to add or swap Winter Term half courses. Last day for change of registration from audit to credit or credit to audit.
F Jan 27	Fee payment deadline for Winter Term fees.
M Jan 30	Topic 1 – Human Topographical Orientation
M Feb 6	Topic 1 – Human Topographical Disorientation
M Feb 13	Topic 2 – Face processing in healthy individuals
Feb 19-26	Reading Week. No lectures. University open (except Family Day).
M Feb 20	Alberta Family Day, University closed (except Taylor Family Digital Library, Law, Medical, Gallagher and Business Libraries). No lectures.
M Feb 27	Topic 2 – Face processing in brain damaged patients
M Mar 6	Topic 3 – Language
M Mar 13	Topic 3 – Language affected in brain damaged patients
M Mar 20	Topic 4 – Neuroplasticity in Healthy individuals
M Mar 27	Topic 4 – Neuroplasticity in Brain Damaged Patients
M Apr 3	Topic 5 – Consciousness in healthy individuals and
M Apr 10	Topic 5 – Consciousness Disorders in Brain Damaged Patients TERM PAPER DUE TODAY.
W April 12	Winter Term Lectures End. Last day to withdraw from full courses and Winter Term half courses.
F April 14	Good Friday. No classes. University closed.
April 15-26	Winter Term Exam Period (No Final Examination scheduled for this course).

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-review-and-makeup-exams>. 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 http://www.ucalgary.ca/registrar/exams/deferred_final. Under no circumstances will this be accommodated by the department.

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 except under exceptional circumstances. 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 http://www.ucalgary.ca/registrar/exams/deferred_final. 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 255), 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.

Course Credits for Research Participation (Max 2% of final grade)

Students in most psychology courses are eligible to participate in Departmentally approved research and earn credits toward their final grades. **A maximum of two credits (2%) per course, including this course, may be applied to the student's final grade. Students earn 0.5% (0.5 credits) for each full 30 minutes of participation.** The demand for timeslots may exceed the supply in a given term. Thus, students are not guaranteed that there will be enough studies available to them to meet their credit requirements. Students should seek studies early in the term and should frequently check for open timeslots. Students can create an account and participate in Departmentally approved research studies at

<http://ucalgary.sona-systems.com>. The last day to participate in studies and to assign or reassign earned credits to courses is **April 12, 2017**.

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 Organizations

Psychology students may wish to join the Psychology Undergraduate Students' Association (PSYCHS). They are located in Administration 130 and may be contacted at 403-220-5567.

Student Union VP Academic: Phone: 403-220-3911 suvpaca@ucalgary.ca

Student Union Faculty Rep.: arts1@su.ucalgary.ca

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 **January 20, 2017**. Last day for registration/change of registration is **January 23, 2017**. The last day to withdraw from this course is **April 12, 2017**.