

PSYC/NEURO 521

Cognitive and Clinical Neuroscience

Fall 2015

Instructor:	Edward (Ted) Slone	Lecture Location:	ST061
Phone:	403-220-4069	Lecture Days/Time:	M 16:00 – 18:45
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Office:	Admin 062		
Office Hours:	Any time		

Course Description and Goals

The course provides an overview of historical and recent research investigating brain mechanisms underlying some of the fundamental topics in cognitive neuroscience. At the outset, students will be introduced to basic concepts of cognitive neuroscience and some of the 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 Methods) and PSYC 375 (Brain and Behaviour)

Required Text

There are no required textbooks for this course. The course material consists of lectures prepared by the instructor, as well as articles chosen by students. Students who wish to expand their knowledge of cognitive neuroscience should consider the following text: Gazzaniga, M.S., Ivry, R.B., Mangun, J.R. (2013). *Cognitive Neuroscience: The Biology of the Mind (4th Ed.)*. New York, NY: W.W. Norton & Company.

Evaluation

Student evaluations will be based on one presentation (25% of final grade), one term paper (25% of final grade), five thought questions (10% of final grade), and one final exam (40% of final grade).

A. Presentation (25%). Once during the semester, each student will be required to deliver a presentation to the class. Depending on class size, presentations may be alone or in pairs (up to instructor discretion). This presentation will be based on one journal article chosen by the student(s) and will fall under one of the course's five major topic areas (Attention, Memory, Language, Executive Function, and Topographical Orientation). Students will provide their top 3 choices of topics on the first day of classes, and topics and dates will be assigned by email later that day. Articles will be either research studies or case reports. Students are required to submit their articles by email to the instructor **at the latest one week** prior to their presentation date. 10% will be deducted from the presentation grade for each day after the due date the article is submitted, including weekends. The purpose of the presentation is to evaluate the scientific value of the chosen study by critically examining its rationale,

methodology, and findings, and to explain to the class how the chosen study contributes to the body of knowledge for the topic area. The presentation should be in the format of PowerPoint slides and should be approximately 30 minutes in length. 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 encouraged to read the article presented as well as additional material related to that topic in advance of the class. Evaluation of presentations is based on creativity and success in engaging colleagues' participation in class discussion, clarity, accuracy and completeness of the presentation, and oral presentation skills.

B. Research proposal (25%). Each student will write a term paper consisting of a research proposal. The proposal can focus on any topic covered during the course. The topic chosen for the proposal can be the same as that chosen by the student for his/her presentation. Students are required to formulate one or two experiments that would make an original contribution to the literature/topic that the paper focuses on. Topics must be pre-approved by the instructor and proposals (in Word format) will be submitted by email **no later than midnight on the due date**. 10% will be deducted from the paper's grade for each day after the due date the paper is submitted, including weekends. The content of the paper must be organized into the following sections: (1) Title, (2) Abstract (150 words maximum), (3) Topic/literature overview, (4) Methods, (5) Expected results, (6) Implications and conclusions, (7) References (minimum 10). The body of the paper (excluding title page and reference list) must not exceed 10 pages (double-spaced, 12 pt Times New Roman font) and must be written in APA format. No figures or tables should be included. Evaluation is based on clarity, appropriateness of experimental design, writing style, and evidence of critical thought. Special consideration will be given to originality and creativity.

C. Thought questions (10%). Once for each of the five topic areas (2% per question), students will be required to post a question to Desire2Learn related to one of the articles that will be presented during the class that week. The questions should be intended to stimulate discussion, and students are encouraged to be creative, while staying relevant, with their questions. Students will be required to post their questions **at the latest 24 hours** prior to the start of class that week. The D2L pages will be locked after this period; therefore, students will not have the opportunity to post questions late.

D. Final exam (40%). During the final exam period (Dec 11 – 22 – specific date TBA), students will have up to two hours to write a final exam. The exam will cover all material from the seven scheduled course lectures, starting on the first day. The exam will not cover any material from student presentations. The format of the exam will be a mixture of multiple choice, short answer, and long answer questions. No textbooks, notes or electronic devices will be allowed during the exam.

Evaluation component	Weighting	Due date
Presentation	25%	Once per semester (date assigned after first class)
Research proposal	25%	Nov 16
Thought questions	10%	Once per topic (5), at latest day before class
Final exam	40%	Dec 11-22 (specific date TBA)

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
M Sep14	Introduction to the course & Introduction to Cognitive Neuroscience lecture
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.
M Sep 21	Introduction to fMRI lecture
F Sep 25	Fee payment deadline for Fall Term full and half courses.
M Sep 28	Topic 1: Attention – Lecture
M Oct 5	Topic 1: Attention – Presentations
M Oct 12	Thanksgiving Day, University closed (except Taylor Family Digital Library, Law, Medical, Gallagher and Business Libraries). No lectures.
M Oct 19	Topic 2: Memory – Lecture
M Oct 26	Topic 2: Memory – Presentations
M Nov 2	Topic 3: Language – Lecture
M Nov 9	Topic 3: Language – Presentations
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.
M Nov 16	Research proposal due date Topic 4: Executive function – Lecture
M Nov 23	Topic 4: Executive function – Presentations
M Nov 30	Topic 5: Topographical orientation – Lecture
M Dec 7	Topic 5: Topographical orientation – Presentations
T Dec 8	Fall Term Lectures End. Last day to withdraw with permission from Fall Term half courses.
Dec 11-22	Fall Term Exam Period. Final exam date TBA.

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>. 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 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 [http://www.ucalgary.ca/registrar/exams/deferred final](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 **Dec 8, 2015**

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 170 and may be contacted at 403-220-5567.

Student Union VP Academic: Phone: 403-220-3911 suvpaca@ucalgary.ca
Student Union Faculty Rep.: Phone: 403-220-3913 socialscirep@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.su.ucalgary.ca/services/student-services/student-rights.html>).

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**.