
Psych 471**Auditory Cognitive Neuroscience****Spring 2016**

Instructor:	Suzanne Curtin	Lecture Location:	SS006
Phone:	403-220-7670	Lecture Days/Time:	MW 12:00 - 14:45
Email:	scurtin@ucalgary.ca		
Office:	A251E		
Office Hours:			

Course Description and Goals

This course will take a multidisciplinary approach to understand the neural systems that contribute to auditory perception, using music and speech as domains of inquiry. We will explore this from an **auditory cognitive neuroscience** perspective. Students will master topics in acoustics, psychophysics, cognitive psychology, neurophysiology, and neuropsychology. Hands-on exercises in sound manipulation and experimentation also will constitute a means of learning about auditory processing. Throughout, the focus will be upon understanding general cognitive and perceptual challenges in perceiving and producing complex sounds like speech and music.

- In this course, we will use music and speech as a means of understanding auditory processing from a neuroscience perspective.
- A primary goal is intellectual synthesis. Strive to organize disparate facts into coherent wholes.
- Learn foundations of acoustics, sound, and auditory processing.
- Think about the broad theoretical questions and about research methods available to address these questions.
- Review the literature, read articles and synthesize the material, thinking critically about scientific information.
- Develop your scientific writing skills.
- Prepare a coherent thesis and argue for it with citations from the scientific literature.

Prerequisites

Psyc 312 – Experimental Design and Quantitative Methods

Psyc 369 – Sensation and Perception

Required Text

Plack, C.J. (2014). *The Sense of Hearing* 2nd Edition. Lawrence Erlbaum Associates: Mahwah, New Jersey. Available in the University Bookstore.

Additional readings will include articles available through the University of Calgary library system.

Evaluation

Exam (30% of final grade); will cover material from May 9 – June 6.

Exam will be short answer and essay style questions. Material from lectures, discussions, and hands-on exercises (lab) will be covered. No study aids will be permitted during exams.

Hands-On Exercises (30% of final grade – Exercise 1 = 20%, Exercise 2 = 10%)

A variety of exercises will be completed when we visit the computer lab (see schedule). They include manipulating sound files and creating acoustic stimuli. See schedule below for details. All exercises will be uploaded to D2L using the digital drop box. **No late exercises will be accepted.**

Peer review of draft of final paper: (10% of final grade) Monday June 20th – in class review. Meet in SS018 Section 3.

Draft of paper submitted to D2L by noon on Friday June 17th. No late drafts will be accepted.

Students will be randomly assigned two papers to review. A rubric for reviewing the papers will be provided (downloaded from D2L).

Peer review provides students with an opportunity to communicate knowledge in new ways. By exposing students to work of their peers, their own work is placed in a new context.

(<http://elearning.ubc.ca/toolkit/student-evaluation/>)

Some of the benefits of peer review include:

1. Improves writing
2. Provides experience in editing
3. Promotes critical thinking, improves communication skills, improves draft, engages students in writing process

Final Review Paper (30% of final grade; due Wednesday June 29th at noon uploaded in D2L)

At the end of the semester, you will submit a paper reviewing a research topic relevant to the course goals. Potential topics will be provided at the beginning of the course. You may use this as an opportunity to investigate a topic in auditory processing that we have not discussed in class or to investigate more deeply one of the topics of the course; you should follow your own interests. **No late papers will be accepted.**

Information about review paper:

- Strive to make this a creative synthesis of some topic of research related to auditory processing from a cognitive neuroscience perspective.
- 10-12 double-spaced pages
- Fully referenced with >10 sources
- Structure your paper in the style of a review article (see *Nature Neuroscience Reviews*, *Trends in Cognitive Sciences*, etc)
- Highlight the major points of debate surrounding the issue
- Note the open questions for future research
- Indicate the ways in which questions are being addressed

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. In this course there will be no rounding up of final grades, especially in light of the opportunities students have to increase their final grade via research participation.

Tentative Lecture Schedule

Date	Topic	Reading
M May 9	Introduction to Course What is Sound (Part 1)	Plack Ch 1-3
W May 11	What is Sound (Part 2)	
F May 13	Last day to change spring registration	
M May 16	Auditory System (Part 1) The ear	Plack Ch 4-7
W May 18	Auditory System (Part 2) The Auditory Cortex	
M May 23	Victoria Day UNIVERSITY CLOSED	
W May 25	Meet in SS018 Section 1 Hands-on exercise 1	
May 26-Jun 5	Congress – No Classes	
M Jun 6	EXAM	
W Jun 8	Methods of exploring CAN Class discussion of final paper topics	Articles TBD
M Jun 13	Speech and Music	Plack Ch 11-12 Articles TBD
W Jun 15	Development and Plasticity	Articles TBD
F Jun 17	Draft of final paper uploaded by noon to D2L	
M Jun 20	Meet in SS018 Section 3 in-class peer review of final paper drafts	
W Jun 22	Impairments	Plack Ch 13 Articles TBD
M Jun 27	Disorders	Articles TBD
W Jun 29	Meet in SS018 Section 1 Hands-on exercise 2. Final paper due at 12:00 uploaded to D2L dropbox.	

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 date. 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 (2) 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 June 30th, 2016.

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

suypaca@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.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** and the last day for registration/change of registration is **May 13, 2016**. The last day to withdraw from this course is **June 30, 2016**.