Advanced Research Methods in Auditory Cognitive Neuroscience
(PSYC / NS&B 398)

Instructor: Psyche Loui
Office Hours: TR 2:00 – 3:00 in Judd Hall room 300, or by appointment

Meeting hours: TR 9:00 – 10:20
Class location: Allbritton 113
Lab location (temporary): Judd Hall, 1st floor library

Computer lab reserved hours: TR 4:15 – 6:00
Computer lab location: ESC 072

Description
This course provides in-depth training on the methods of auditory cognitive neuroscience. We will review contemporary studies in auditory cognitive neuroscience, specifically in speech, language, and music. Students will design and implement a group project, learn to analyze the data, and write up the results in an end-of-term paper.

Course Registration
Enrollment in this course is by Permission Of Instructor during the pre-registration period. If you would like to enroll, please send an email to ploui@wesleyan.edu with your name, class year, major, previous relevant courses you have taken, and a brief explanation on why you want to take the course. To secure your place in the course, please be sure to come to the first day of class.

Course Materials
Readings, experimental software, and other course material will be posted on the course website on Moodle or on Wesfiles throughout the course. Additionally, experimental software, tutorial packages, and data will be posted in the lab Dropbox folder (MIND Lab Wes).

Projects
Neuroimaging data meta-analysis
Music and epilepsy – EEG sonification (Music programming)
Auditory feedback – Efference copy in voice empathy (Sound analysis)
Pitch production and empathy (Sound analysis and head motion capture)
Harmonic syntax – music and language (Reaction time and neuropsychology)

Course schedule (Note: Approximate schedule only; actual schedule will depend on progress of projects)
1/23 – 1/30 Assignment of group projects
2/4 – 2/15 Literature review and meta-analysis
2/16 – 3/4 Experiment design and programming
3/5 – 5/2 Data collection and analysis
5/3 – 5/16 Writeup (group paper)
Spring 2014

Evaluation
You are expected to spend around 10 hours per week on projects in the lab. This does not include time spent in class meetings.
Your final grade will be based on the following:
20% Attendance
20% Participation
20% Literature review and meta-analysis
40% Project (Proposal 10% + Design and Analysis 10% + Paper 20%).
Please read the Wesleyan Honor Code and abide by it closely (www.wesleyan.edu/studentaffairs/honorboard/honorcode.html).

Example readings for literature review


**Disability Resources**

Wesleyan University is committed to ensuring that all qualified students with disabilities are afforded an equal opportunity to participate in and benefit from its programs and services. To receive accommodations, a student must have a documented disability as defined by Section 504 of the Rehabilitation Act of 1973 and the ADA Amendments Act of 2008, and provide documentation of the disability. Since accommodations may require early planning and generally are not provided retroactively, please contact Disability Resources as soon as possible.

If you believe that you need accommodations for a disability, please contact Dean Patey in Disability Resources, located in North College, Room 021, or call 860-685-2332 for an appointment to discuss your needs and the process for requesting accommodations.