LING646: Cognitive Neuroscience of Language
Fall 2013

Time: Mo-We 9:30 – 11
Place: 3416 Marie Mount Hall

Instructor: Ellen Lau
Office: MMH 3416
Email: ellenlau@umd.edu
Office hours: by appt.

Course website: http://ling.umd.edu/~ellenlau/courses/ling646/LING646_F13.html

Course description

This course provides an introduction to cognitive neuroscience research on language. Research in this domain can be organized into two categories:

(1) Research that investigates the neural implementation of linguistic representations and processes—for example, trying to determine which areas of cortex contain the units devoted to a particular computation. These questions can only be addressed by cognitive neuroscience methods, although they require a prior theory of the representations and processes to be implemented.

(2) Research that uses cognitive neuroscience methods to investigate questions about the form of linguistic representations and the algorithms used for language processing in comprehension and production. In this case, cognitive neuroscience techniques are simply another tool that can be used to complement existing research with linguistic theory and behavioral and eye-tracking experiments.

Here we will cover both. In the interest of time, the focus in (2) will be on the unique contributions that cognitive neuroscience methods can make to existing questions in linguistic/psycholinguistic theory; therefore some basic familiarity with how research is conducted in these fields will be assumed. Look at the course schedule for specific topics.

A significant component of the course will focus on the methods themselves, particularly EEG, MEG, and fMRI. For better or worse, cognitive neuroscience methods are increasingly fashionable within cognitive science, and the results of this research are increasingly influential. Therefore a deeper technical understanding of these methods is likely to be necessary even for students who do not anticipate using them in their own research.

Class Participation

You must attend class; if you don’t, you won’t get much out of this course.

My pet peeve is surfing/working on your laptop/phone while other people are talking, so please don’t do it in my class. Life is too short to spend it somewhere else!
Materials

The schedule of readings, links to the articles, and supplementary readings is maintained on the course website ling.umd.edu/~ellenlau/courses/ling646/LING646_F13.html (not Canvas!). This schedule is subject to change.

Some lab assignments can be easily completed on your personal computer, and some will be easier to complete on the ‘cephalopod’ computer in 3416 Marie Mount Hall. This computer can be easily accessed remotely from most Mac laptops.

Coursework and Grading

The university Canvas course site will be used for submitting assignments (and nothing else). If you have difficulty accessing Canvas, let me know.

(1) 30% - Reading responses, class participation
(2) 30% - Lab assignments
(3) 30% - Class project
(4) 10% - Quizzes

(1) Readings will be assigned for each class, and you must submit a one-paragraph response on the readings on Canvas by 9pm the night before.

(2) Four labs will be assigned. The first three will require analysis of small cognitive neuroscience datasets. The fourth will consist of a short (3p+) experiment proposal. The labs are designed to be fairly accessible for all levels of computer geekiness, but if you have less experience with experimental data analysis then you should make sure to start them early enough to have time to get help if you need it.

(3) The class project will consist of collaboratively designing, executing, and analyzing, and writing up a pilot ERP experiment. The EEG lab is right next door to our classroom, and stimulus presentation software is set up to facilitate most kinds of experimental designs involving visual word presentation.

(4) Each week a short quiz will be given covering a small number of cognitive neuroscience facts to be memorized.

General Policies

Late reading responses will not receive credit. Other assignments turned in late will be accepted only at the discretion of the instructor and will receive a 10% penalty per day late. This policy is designed to prevent graduate students from spending too much time on coursework and/or incurring incompletes.

Students are encouraged to work together on lab assignments and discuss readings outside of class, but are expected to write up their work independently.

Please don’t hesitate to contact me if you are having trouble with the lab assignments, the readings, or any other aspect of the course!
Attendance Policy

Religious holidays: The University of Maryland’s policy provides that students should not be penalized because of observances of their religious beliefs. Students shall be given an opportunity, whenever feasible, to make up within a reasonable time any academic assignment that is missed due to individual participation in religious observances. It is the student’s responsibility to inform the instructor of any intended absences for religious observances before the day to be missed.

Snow Policy: On days the university is closed due to inclement weather, class is cancelled. However, subsequent days will not be altered. For example: if there is a test on Friday, and school is cancelled on Thursday, the test will still be on Friday. It is up to you to email questions you have in preparation for the test.

Students with Disabilities

If you have a physical disability or a learning disability, it is your responsibility to bring it to my attention at the beginning of the course – before any exams or assignments are due. I will make every effort to accommodate your needs. If you require special accommodations for test-taking, you need to arrange for this at least one week before a scheduled exam, and then also remind me by email a day or two before the exam.

Academic Honesty:

We follow the University's policies on academic honesty and will report any form of cheating according to these policies. Please review the terms and penalties of the Student Honor Council’s Code of Academic Integrity at: http://www.shc.umd.edu/code.html. According to this code plagiarism is defined as “intentionally or knowingly representing the words or ideas of another as one’s own in any academic exercise.” This is regarded as a form of academic dishonesty and suspected cases of plagiarism will be referred to the Honor Code for subsequent action. The grade of XF is listed on the transcripts of individuals found to have plagiarized work; this grade means an F was received because of academic dishonesty.”

You can learn a lot from working through problems with others, and for this reason collaboration is encouraged in this course. However, collaboration can only work effectively if you do so responsibly, and follow acceptable practices of academic honesty. If you work together, you should:

- Write up your assignment yourself. If you have edited or simply copied your friend's assignment, then you have not written up your assignment yourself.

- Don't hand in something that your collaborator came up with that you don't fully understand - this is plagiarism, and it is dishonest.

- If you work as part of a group, you must write this at the top of your assignment, and give the names of the people you worked with. If you fail to do this, it will be treated as plagiarism.

- If you are in any doubt, consult the University Policy on Academic Integrity. We treat cases of academic dishonesty seriously.