NACS642: Cognitive and Computational Neuroscience  
Spring 2013

Time: Tu-Th 10 – 12  
Place: Maryland Neuroimaging Center

Instructor: Ellen Lau  
Office: MMH 3416  
Email: ellenlau@umd.edu  
Office hours: Th 2-3:15 and by appt.

Course website: http://ling.umd.edu/~ellenlau/courses/nacs642/NACS642_S13.html

Course description  
This survey course provides an introduction to cognitive neuroscience. Cognitive neuroscience is a broad domain ‘at the intersection of cognitive science and neuroscience’. In practice, what distinguishes cognitive neuroscience research from other subdomains of cognitive science and neuroscience is a particular set of methods applied to a particular set of problems. In this course we will explore these methods and what they have taught us about human cognition. An important component of the course is hands-on experience with three critically different cognitive neuroscience methods: EEG, MEG and fMRI.

Course requirements and Grading  
15% - Class participation  
15% - Quizzes  
40% - Reading responses  
30% - Lab Assignment

Materials  
The textbook for the course is Principles of Cognitive Neuroscience, 2nd ed. by Purves et al. The 2nd edition is new and organized in a substantially different way from the 1st edition, so make sure that you get that one. The schedule of readings, links to the articles, and supplementary readings is maintained on the course website. This schedule is subject to change, so make sure to check it frequently. For the lab assignment, the computer lab at the MNC is equipped with high-powered computers that are available for neuroimaging data analysis.

Readings  
Readings will be assigned for each class, both from the textbook and from the primary literature. Carefully reading the assigned reading is the most important part of this class.  
Textbook readings. Brief weekly quizzes will test your knowledge of the textbook readings.  
Primary literature. You will submit reading responses on the primary literature readings before the class where they are discussed—minimum one full paragraph per article. This is an opportunity to describe what you thought was important about the results, raise doubts or concerns about the arguments, and note questions that you had. Reading responses are due by 9pm the night before class.

Class participation  
You must regularly attend class and participate in class discussion. Using laptops to take notes is fine, but please be respectful of your classmates and do not use laptops for non-class functions while they are talking!

Lab assignment  
The lab assignment will involve dividing the class into three groups, each of which will implement the same experiment in one of three methodologies (EEG, MEG, and fMRI), and collect and analyze data from 3 subjects. Each group will present their results in class and make the results available to the class, and each individual will submit a brief write-up describing and discussing the results across all three methodologies.
General Policies
- Students are encouraged to work together on the lab assignment and discuss readings outside of class, but are expected to write up their work independently.

- Unless due to a documented personal emergency, late reading assignments will not be accepted, and late project write-ups will receive a 10% penalty for each day they are overdue.

- Please don't hesitate to contact me if you are having trouble with any aspect of the course—and sooner is always better than later.

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.