Psychology 733
Cognitive Neuroscience of Memory
Fall 2006

In this course we will consider issues and data associated with many of the central ideas in this field. Our readings and discussion will reach from decades-old foundational papers to reports that appeared this past summer.

Instructor: Brad Postle, 515 Psychology, 262-4330, postle@wisc.edu.
Office hours by appointment.

With the exception of time-sensitive emergencies, email is the most effective and preferred way for you to contact me.

Format: Each week will be devoted to a particular theme, and to the discussion of (at least) three papers. One will be either a revered part of the memory canon or a particularly comprehensive review paper. This will provide context for the target papers. Additionally, each week two students will give informal presentations of target papers related to the theme. The presentation time itself will give us an opportunity to discuss and assess in detail the theory, methods, results, and interpretation associated with that particular paper. Following the presentations we will end the morning with an attempt to synthesize what we've learned about this theme, and/or to articulate the important outstanding questions associated with it. Note that everyone is expected to have read all of each week's papers prior to class.

Readings will be available on the “Grad open reserve” shelf in the departmental library (Brogden Psychology building, room 438), or for download in PDF format at the course Web page: http://psych.wisc.edu/postlab/, then navigate through “Brad Postle” > “Teaching” > “2006-07” > etc. (Readings marked with a “*” will only be available in hardcopy.)

Due one week after your presentation is a research paper on a memory-related topic of your choice; please discuss your topic with me before getting started on it.

Grading will be based on in-class participation and the paper. My approach to paper grading is to apply the same standards that I do when reviewing a manuscript for a scholarly journal (except that I tend to be even more persnickety about spelling/grammar/style on student papers), and to assign a provisional letter grade that is commensurate with my comments. The gradee then has the option of revising and resubmitting for a final grade, if s/he chooses to put in the additional effort.

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October 23   Introduction, neuroanatomy, overview

General reference: You can find an extensive listing of Web-based neuroanatomy resources at: http://www.neuropat.dote.hu/anatomy.htm

* guest lecturer Prof. Tim Rogers
October 30  Long-term memory: systems and principles
   Canonical: *Squire (1992). Memory and the hippocampus: A synthesis from

   Target: Hannula, Tranel, Cohen (2006). The Long and the Short of It: Relational Memory
   Impairments in Amnesia, Even at Short Lags. The Journal of Neuroscience, 26, 8325-
   8359.

   Presenter: Jerry Hoepner

   Target: Olson, Page, Moore, Chatterjee, and Verfaellie. (2006). Working Memory for
   Conjunctions Relies on the Medial Temporal Lobe. The Journal of Neuroscience, 26,
   4596-4601.

   Presenter: Mike Amato

November 6  Cellular and molecular correlates of LTM
   York. (excerpt: pp. 60-66)
   +
   Reviews Neuroscience, 4, 926-929.

   Target: Lisman (2003). Long-term potentiation: outstanding questions and
   attempted synthesis, Philosophical Transactions of the Royal Society of London B,
   358, 829-842.

   Presenter: Drew Fox

   NMDA and AMPA receptors to encoding and retrieval of one-trial place memory.

   Presenter: Helen Weng

November 13  The Functional Organization of the Medial Temporal Lobe
   of the Royal Society of London, B, 357, 1111-1121.

   Lee, Buckley, Gaffan, Emery, Hodges, Graham (2006). Differentiating the Roles of
   the Hippocampus and Perirhinal Cortex in Processes beyond Long-Term Declarative
   Memory: A Double Dissociation in Dementia. The Journal of Neuroscience, 26,
   5198–5203.

   Presenter: Heather Jessen
November 13, continued


**Presenter:** Helen Weng

November 20  **Nondeclarative memory and repetition effects**  


**Presenter:** CJ Liu


**Presenter:** Heather Jessen

November 27  **The relationship between working memory and attention**  


**Presenter:** CJ Liu


**Presenter:** Mike Amato
December 4  Acetylcholine


*Presenter:* ___Aaron Heller__________


*Presenter:* ____Jerry Hoepner__________

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December 11  Behavioral genetics of working memory and attention


*Presenter:* _______Aaron Heller__________


*Presenter:* _____Drew Fox__________

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Where to take complaints about a Teaching Assistant or Course Instructor:

Occasionally a student may have a complaint about a T.A. or course instructor. If that happens, you should feel free to discuss the matter directly with the T.A. or instructor. If the complaint is about the T.A. and you do not feel comfortable discussing it with him/her, you should discuss it with the course instructor. If you do not feel the instructor has resolved the matter to your satisfaction, then you should speak to the Psychology Undergraduate Advisor, Ms. Arlene Davenport (Room 428 Psychology) or the Department Chair, Professor Joseph Newman (Room 238 Psychology). You should also speak to either of these individuals if the complaint is about the instructor and you do not feel comfortable discussing it directly with him/her.

If you believe the T.A. or course instructor has discriminated against you because of your religion, race, gender, sexual orientation, or ethnic background, you also may take your complaint to the Affirmative Action Office (Room 175 Bascom Hall). If your complaint has to do with sexual harassment, you may also take your complaint to Ms. Arlene Davenport, the Psychology Department sexual harassment contact person.