PSY 341K
Brain mechanisms of Learning and Memory
Spring 2010

Instructor: Prof. Marie-H. Monfils
Office: SEA 6.104
Office hours: Tue 8:30-9:30, Wed 9:00-11:00
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Course Description:

This course will examine behavioral and brain mechanisms of learning and memory in humans and other animals. Specific topics include: behavioral approaches to studying learning and memory, a survey of techniques used to analyzed changes that occur in different brain areas in the course of learning, as well as principles of memory acquisition, consolidation, extinction, persistence, retrieval, forgetting, and reconsolidation. This course is intended to allow you to think critically, give constructive feedback to peers, and improve your presentation and writing skills.

Reference text:

MA Gluck, E Mercado, and CE Myers (2007) Learning and Memory: from Brain to Behavior. Worth publishers.

Weekly assigned readings

Class format:

Class session will include lectures, as well as student presentations and discussions of relevant journal articles assigned weekly.

Course requirements and grading policy:

Oral presentation:	15%
Article summaries (~9):	20%
Midterm exam:	15%
News and views essay:	20%
News and views peer critique:	10%
Final exam:	20%

Grading:

Oral Presentations:
Oral presentations will be a (10-15 min) summary of one research article corresponding to the day's topic. You should choose from the list of articles provided. I strongly encourage you to use powerpoint, overheads and/or other visual aids. Grading will be based on the content and clarity of your presentation as well as your ability to demonstrate depth of knowledge of the covered material. A general guide of what should be included in your presentation will be provided.

Article summaries:
Every Tuesday (with a couple of exceptions, noted below), you will hand in a research article summary. On the day that you give a presentation, you will not be required to hand in an article summary. On the day that you have an exam, you will not be asked to hand it an article summary. A general guide of what should be included in your article summary will be provided.

News and views article:
This assignment will require you to write an article for a non specialist audience about a new scientific advance (a recently published article of interest). You will select your own article (to be approved by the professor) from a number of topics pertinent to the class. You will hand in 2 versions of this article. Your first version will be reviewed by 2 students in the class (and likewise, you will provide written feedback to 2 students). All assignments will be blindly reviewed. Once you receive feedback, you will revise your article and address the reviewers' comments. The reviewers will not assign you a grade. The professor will assign the grade based on (1) the initial submission, (2) the final submission, and (3) your response to the reviewers' comments.

NOTE: Hard copies of the assignments (article summaries and news and news articles) are to be handed in at the beginning of class on the due date. Assignments may not be emailed. Late assignments will NOT be accepted.

Exams:
You will have 2 exams (a midterm and a final) that will consist of multiple choice, fill in the blanks, and short answer and essay questions. You will be responsible for the material covered in the textbook, the class lectures, as well as the assigned articles. The midterm will include questions drawn from material discussed up until that exam, and the final will focus on what will be covered the rest of the semester. Both exams will be open-book, meaning that you will be allowed to use your textbook, the articles covered in class, and your class notes. Electronic devices, and communication with your classmates will be prohibited during exams. Make-up exams will not be permitted, unless a valid and documented reason is provided. You are welcome, within reason, to dispute the grading on exams by providing written justifications to the instructor.

Class Participation:
You are strongly encouraged to attend all classes, to ask questions, and discuss, especially during the paper presentations. 2% bonus points may be granted, at the Professor's discretion, to individuals who attend every class, and are actively engaged in discussions.

Class schedule:

Date	Topic	Readings
Jan 19, 21	Introduction to course	
Jan 26	Psychology and Neuroscience of Learning and Memory	Ch. 1 & 2
Jan 28	Episodic and Semantic Memory	Ch. 3 + assigned articles
Feb 4	Skill Memory	Ch. 4 + assigned articles
Feb 11	Working Memory and Exec. Control	Ch. 5 + assigned articles
Feb 18	Non-Associative Learning	Ch. 6 + assigned articles
Feb 25	Classical Conditioning	Ch. 7 + assigned articles
Mar 9	Instrumental Conditioning	Ch. 8 (no assigned articles)
Mar 11	**MIDTERM EXAM**	

--**Spring Break**--

Date	Topic	Readings
Mar 25	Memory across the lifespan	**Ch. 12** + assigned articles
Apr 1	Emotional Learning and Memory	Ch. 10 + assigned articles
Apr 8	Emotional Learning and Memory	Ch. 10 + assigned articles
Apr 15	Observational Learning	Ch. 11 + assigned articles
Apr 22	Language Learning	Ch. 13 + assigned articles
Apr 29	Generalization, discrimination, and representation of similarity	**Ch. 9** (no assigned articles)
May 4	Synthesis and Review	No required readings
May 6	**FINAL EXAM**	

<u>Due dates for articles summaries and class presentations:</u>

Feb 2	Episodic and Semantic Memory	Ch. 3 + assigned articles
Feb 9	Skill Memory	Ch. 4 + assigned articles
Feb 16	Working Memory and Exec. Control	Ch. 5 + assigned articles
Feb 23	Non-Associative Learning	Ch. 6 + assigned articles
Mar 2	Classical Conditioning	Ch. 7 + assigned articles

--**Spring Break**---

Mar 30	Memory across the lifespan	**Ch. 12** + assigned articles
Apr 6	Emotional Learning and Memory ***News and views first draft due**	Ch. 10 + assigned articles
Apr 13	Emotional Learning and Memory	Ch. 10 + assigned articles
Apr 20	Observational Learning ***News and Views corrected draft due**	Ch. 11 + assigned articles
Apr 27	Language Learning	Ch. 13 + assigned articles
May 4	***News and Views final draft due**	

Computation of grades:

Your final grade will be determined by adding the scores from the research articles summaries, oral presentation, and exams. The total score will be rounded to the nearest decimal, e.g., 89.5% = 90%, 89.4% = 89%. Letter grade cutoffs are as follows: 91.5-100=A, 89.5-91.4= A-, 87.5-89.4=B+, 81.5-87.4=B, 79.5-81.4=B-, 77.5-79.4=C+, 71.5-77.4=C, 69.5-71.4=C-, 67.5-69.4=D+, 61.5-67.4=D, 60-61.4=D-, Less than 60 =F.

Pre-requisite information:

The Psychology Department will drop all students who do not meet the following prerequisites:
(a) PSY 301 with a C or better
(b) PSY 418 (or an equivalent listed in the course schedule) with a C or better
(c) Upper-Division standing (60 hours completed)
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The University of Texas at Austin provides upon request appropriate academic accommodations for qualified students with disabilities. For more information, contact the Office of the Dean of Students at 471-6259, 471-4641 TTY.

Scholastic dishonesty is a very serious offense, and will result in disciplinary proceedings (and could result in your dismissal from the Unkiversity). For the University's official definition of scholastic dishonesty, see [Section 11-802, Institutional Rules on Student Services and Activities](#) of the University Catalog.