

**Advanced Topics in Cognitive Science (Psychology 4431-001)**  
**“Cognitive Neuroscience studies on Memory”**  
**T/TH 3:30-4:50; Lab: M 1-2:50**  
**FALL 2012**

**Instructor:** Heekyeong Park, Ph.D.

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**Course Website:** <http://www.uta.edu/blackboard/>

**Course Description:** This course will focus upon core topics in neuroimaging studies (e.g., fMRI) of human memory. This course will be a combination of lecture and presentation/discussion format. The instructor will provide an overview of a topic and two/three students will present assigned articles each class. All readings will be provided through Blackboard. Students who are not presenting will be required to submit two questions or relevant discussion items via Blackboard by a day prior to the presentation to promote discussion.

**Course Learning Goals and Objectives:** The course aims to study the current neuroimaging studies from cognitive neuroscientific perspective. The goal is to provide a broad introduction of neuroimaging studies including fMRI memory studies that will serve as a steppingstone for further understanding of specific topics in cognitive neuroscience in depth.

**Textbook:** There is no textbook for this class. However <http://www.fil.ion.ucl.ac.uk/spm/doc/books/hbf2/> provides background information of fMRI studies. ‘Handbook of Functional Neuroimaging of Cognition’ edited by R. Cabeza & A. Klingston (MIT Press, 2001) provides basic ideas.

**Course Requirements:**

Students are required to present two-three class presentations (based on assigned readings), to actively participate in class discussion, and to submit one research proposal. Students are expected to attend class, to complete the weekly readings before class (summary for article) and to prepare questions for discussion of relevant topics during class.

## **Course Assessments:**

**Individual Presentation (20%):** Three/four articles will be assigned for each topic and the presentation of individually assigned articles will be evaluated. Each presentation should cover different topics. Should you want to present material other than the articles on class reading list, you may do so with the instructor's permission.

Each student in the class will give 2 Powerpoint presentations for the target articles and related research. The presentation should last 30-40 minutes. A presenter should be prepared to spend approximately 30 minutes giving the presentation and 10 minutes answering questions regarding the presentation. A grading rubric is available on blackboard. The specific presentation dates will be posted on the tentative schedule of presentations. This assignment will be worth 100 points for each presentation.

**Discussion/Participation (48%):** Students are expected to participate in class actively. Class participation will be assessed in 2 ways. These assignments will be used to foster discussion and class participation on various topics covered in the course.

(1) For each article discussed in class, students should prepare two discussion questions worth 1 point each. In addition, each student is required to write a 1.5-2 page summary of the article. A template/grading rubric is provided on blackboard that specifies the content that should be included for each summary written (8 points each). The summaries and discussion questions will be submitted via Blackboard and due by midnight CST the evening prior to the discussion of the article in class. For example, if the article is to be discussed during class on Tuesday August 28th, you should upload the associated summary and discussion questions by the evening of Monday August 27th at midnight CST. Late assignments will not be accepted and will receive 0 points. The tentative schedule and templates are available and should be used for preparation of the class. Each student will be expected to complete summaries and discussion questions for 40 articles by the end of the semester.

(2) Active participation in discussion will also be assessed through your active questioning and the involvement in discussion (2 points for each article).

(3) Class attendance (.5 point for each class)

**Overall Class Participation (5%):** Overall commitment of all class activities

**Lab (25%):** refer lab syllabus for details

**Grading Policy:** Grades are based on a percentage score and not a curve. If you are taking the course Pass/Fail, you must have at least 70% to Pass. All coursework must be completed by the last day of class for credit.

**Point assignment**

Class Presentation 200 pts  
Discussion points 80 pts  
Article summary 320 pts  
Discussion participation 80 pts  
Class attendance 14 pts  
Lab activities 250 pts  
Class Participation: 50 pts  
**Total: 994 pts**

**Percentage Score required to obtain each letter grade**

100%-90% A  
89%-80% B  
79%-70% C  
69%-60% D  
59%-less F

Missed presentations or discussion will be accorded a grade of zero unless the student submits a valid written excuse recognized by the university's rules. The final grade will be calculated based on the sum scores of presentation, discussion, class participation, and lab activities.

**Make-up Exam Policy:** This course does not have any written examinations. All written assignments are to be submitted via blackboard by the dates indicated on the tentative calendar. All oral presentations are to be given in class or lab at the designated time. A grade of 0 will be given to any assignment or presentations not completed by the designated completion date.

**Course Business Communication:** All course-related announcements and updates of schedule will be communicated via Blackboard.

**Attendance & Drop Policy:** Attendance is expected. Your participation for the class is vital for your progress in this course. Your participation for each class will be counted. The drop policy is as established by University policy (see below).

**Other Information**

**Drop Policy:** Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance.** Repayment of certain types of financial

aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://www.uta.edu/ses/fao>).

**Americans with Disabilities Act:** The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the *Americans with Disabilities Act (ADA)*. All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at [www.uta.edu/disability](http://www.uta.edu/disability) or by calling the Office for Students with Disabilities at (817) 272-3364.

**Academic Integrity:** At UT Arlington, academic dishonesty is completely unacceptable and will not be tolerated in any form, including (but not limited to) "cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts" (UT System Regents' Rule 50101, §2.2). Suspected violations of academic integrity standards will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University.

**Student Support Services:** UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may contact the Maverick Resource Hotline by calling 817-272-6107, sending a message to [resources@uta.edu](mailto:resources@uta.edu), or visiting [www.uta.edu/resources](http://www.uta.edu/resources).

**Electronic Communication:** UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <http://www.uta.edu/oit/cs/email/mavmail.php>.

**Student Feedback Survey:** At the end of each term, students enrolled in classes categorized as lecture, seminar, or laboratory will be asked to complete an online Student Feedback Survey (SFS) about the course and how it was taught. Instructions

on how to access the SFS system will be sent directly to students through MavMail approximately 10 days before the end of the term. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback data is required by state law; student participation in the SFS program is voluntary.

**Final Review Week:** A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week.

Tentative Schedule\*

<b>Week</b>	<b>Topic</b>	
8/23	Introduction; Course overview	
8/28	fMRI basics, Subsequent memory procedure	
9/04	Subsequent memory effects	Presentation
9/11	Item Memory	Presentation
9/18	Associative Memory	Presentation
9/25	Source memory	Presentation
10/02	Prefrontal lobe & Cognitive control	Presentation
10/9	Medial Temporal lobe in Memory	Presentation
10/16	SfN meeting: no class (10/16) Working Memory (10/18)	Presentation
10/23	Working Memory Emotion	Presentation
10/30	Emotion & Memory Aging	Presentation
11/06	Aging & Memory Memory Development	Presentation
11/13	Sleep & Memory	Presentation
11/20	Sleep & Memory Thanksgiving Holiday (11/22)	
11/27	Reward & Memory	Presentation
12/04	Review	

\*Exam and lecture content dates are tentative and subject to shift according to the needs of an individual class.