Classroom & time: Tuesday 4\textsuperscript{th} period TUR 1105 (10:40-11:30am)  
             Thursday 4+5\textsuperscript{th} periods FAC 120 (10:40am-12:35pm)

Instructor: Dr. Edith Kaan  
            Office: 4127 Turlington Hall.  
            Office Hours: T5+6 (11:45am-1:40pm); R6 (12:50-1:40 pm), and by appointment  
            Phone: (352) 392-0639 x 229  
            E-mail: kaan@ufl.edu

Course description:  
In this course, major issues and terminology in brain and language research will be introduced.  
Topics addressed include: brain imaging techniques, ERPs, lesion studies, auditory perception,  
categorization in the brain, localizationist versus generalist approaches, symbolist versus  
connectionist approaches, modularity, innateness, critical period, lateralization, plasticity,  
hemispheric differences. Students will be familiarized with important controversies related to  
these issues, and will learn to evaluate data from brain imaging research. In laboratory sessions  
and assignments, students will have the opportunity to focus in on a particular topic.

Objectives:  
- To learn about central issues in brain and language research  
- To learn to evaluate data from neurolinguistic and brain imaging studies  
- To improve written and oral presentation skills

Prerequisite: LIN3010 or SPA4004

Course website:  
- Course materials (reading, lecture notes, syllabus, etc) and exercises will be made available  
on the Sakai course website on E-learning (https://lss.at.ufl.edu/). You’ll find the syllabus as  
well as some of the readings, and any handouts or other relevant materials. Deadlines and  
grades will also be posted on the website. You are responsible for checking the site regularly  
and for letting the instructor know promptly if anything is unclear, or if your grade has been  
entered incorrectly.

Course readings:  
- Ward, Jamie (2010). *The student’s guide to cognitive neuroscience. 2\textsuperscript{nd} edition*. Psychology  
  MIT Press, 1997; Electronically available through MIT Cognet (UF lib)  
- Readings available on-line (through UFlib, or course website), see last page for full  
  references.

Requirements:  
- Please bring your laptop to class, since we will be regularly doing assignments in class for  
  which you need access to information posted on-line. These assignments serve as an  
  extension of the materials covered by the lecture, and will allow students to focus on
particular problems into more detail, and to get hands-on experience in using relevant internet sources and interpreting data from experiments.

- **Homework Assignments/Lab:** Some of the assignments made in class (lab), will need to be handed in, and will be graded. In addition, all homework assignments will be graded, unless indicated otherwise. Answers to lab and homework assignments are to be submitted through Sakai before the start of the next class, unless indicated otherwise.

- **Tests:** Tests are non-cumulative and will test material covered in the lectures, labs and course readings. These exams will consist of short multiple-choice questions, and at least one essay question in which you will be asked to apply your knowledge to a new situation. Tests should always be submitted individually.

- **Final paper:** The final paper assignment should be carried out and handed in individually, although interactions among students are strongly encouraged. You can choose among the topics provided by the instructor later in the course, or choose your own topic in discussion with the instructor. For the final paper, you are requested to do a literature search, and find a few relevant journal articles, each discussing different points of view. The final paper should clearly summarize the main points and arguments (data) in favor of one position or the other and should conclude with your own stance, as well as suggestions for further experimentation. The paper should be double spaced and between 6 and 12 pages long, including references. It should be formatted according to APA guidelines, and submitted through Sakai. At various points throughout the semester draft versions of this paper, or other assignments related to this paper need to be handed in.

- **Poster presentation:** The course is concluded with an individual poster presentation on the basis of your final paper project. The poster should clearly summarize the main points and arguments (brain imaging data) in favor of one position or the other and should conclude with your own stance, and suggestions for further experimentation. You will be graded on the quality of the poster and on the oral presentation of the poster during a poster session.

- **Participation in LIN/SLSH experiments.** Before November 12! To encourage awareness of different aspects of experimental research in language-related fields, you are required to participate in 2 hours of language or communication research during the semester. A list of experiments that qualify for this credit can be found at http://slhs.phhp.ufl.edu/student-info/participant-pool-2/. This site will be updated throughout the semester. Please retain a copy of the IRB form as proof that you participated. You need to have participated in 2 hours of experiments before November 12, 2013 for you to receive credit. This assignment will be worth 2% of your course grade. If you choose not to participate or do not qualify for any of the studies, you can receive the same amount of course credit for reading a short research article and writing a 2 page synopsis. This article needs to cover a brain and language topic, and cannot be one of the articles used for your final poster/paper assignment. This paper must be turned in no later than November 12, 2013. If you are currently enrolled in other classes that require participation in experiments, and your total participation requirement exceeds 4 hours this semester, please see the instructor.

**Overall grade.** The weighting of the various requirements in the final grade is

- Homework assignments /lab assignments: 13%
- Tests: 60% (20% each)
- Final paper, paper-related assignments, and poster presentation: 25%
• Participation in LIN/CSD experiments: 2%

The course grading scale is:
A  = 90-100  B  = 80-83.9  C  = 70-73.9  D  = 60-63.9
A- = 87-89.9  B- = 77-79.9  C- = 67-69.9  D- = 57-59.9
B+ = 84-86.9  C+ = 74-76.9  D+ = 64-66.9  E  = < 56

For UF grading policies for assigning grade points, see:
https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

Policies:
• Please turn off all cell phones.
• Emailing, web browsing, face-booking, chatting and other cell phone or computer activity is not allowed during class unless this is part of the course assignments.
• Students are required to hand in all assignments and tests before the end of the class period they are due. Please contact the instructor in advance if you need to skip a class, or cannot make a deadline. Please also make sure you have at least one external backup of the assignments you make for this class. Computer problems will not be considered a valid excuse for missing assignments and other deadlines.
• There will be no make-up exams, make-up assignments or extensions of deadlines without a documented medical excuse.
• If you miss more than 15 minutes of more than three class periods without a documented medical or academic excuse, one point will be deducted from your final score for each additional time you are absent, leave early, or come late.

Teamwork and academic honesty:
Work should be submitted individually, unless the assignment guidelines state otherwise or you have made prior arrangements with the instructor. Although students are encouraged to discuss course-related issues outside of class, this should not be confused with writing up the results of a classmate's work, letting a classmate copy your work, or having a classmate check your work – this is unacceptable. See the University of Florida Honor Code and the academic honesty guidelines at https://catalog.ufl.edu/ugrad/1213/advising/info/student-honor-code.aspx.

Accommodations for students with disabilities:
Students requesting classroom accommodation must first register with the Dean of Students Office: http://www.dso.ufl.edu/drc/. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. The Disability Resource Center is located in 001 Building 0020 (Reid Hall). Their phone number is 392-8565.

Schedule:
The following schedule is an estimate of the course’s progress, with readings for the given week and approximate dates of the tests. The instructor will let you know when the tests and assignment deadlines are exactly as they approach, and will keep you updated if we go off track. Please also regularly consult the schedule on the course website on Sakai for updates.
Overview of the course, Fall 2013 (subject to change!)

<table>
<thead>
<tr>
<th>Week/date</th>
<th>Tuesday</th>
<th>Thursday</th>
<th>Readings</th>
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<tbody>
<tr>
<td>1 -Aug 22</td>
<td>Intro to the course</td>
<td>Brain anatomy</td>
<td>Ward Ch 1+2</td>
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<td>2 -Aug 27/29</td>
<td>ERP</td>
<td>Interpreting ERP data; fMRI</td>
<td>Ward Ch 3; Kaan (2007); Primer on brain imaging techniques</td>
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<td>3 -Sept 3/5</td>
<td>fMRI</td>
<td>Brain anatomy and neuroimaging; localizing activity</td>
<td>Ward Ch 4, with the exception of p. 59-62</td>
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<tr>
<td>4 -Sept 10/12</td>
<td>Lesions</td>
<td>Interpreting aphasic symptoms; TMS Auditory perception: The mismatch negativity.</td>
<td>Ward Ch 5+10; Optional: Phillips et al. (2000)</td>
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<tr>
<td>5 -Sept 17/19</td>
<td>Auditory perception</td>
<td>Field trip to ERP lab and fMRI scanner (meet at The Rock, Turl. Plaza)</td>
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<td>6 -Sept 24-26</td>
<td>Test 1</td>
<td>Words; Semantic categorization.</td>
<td>Ward pages 56-63; 226-9; 233-245; 261-266; 170-2. Patterson, Nestor &amp; Rogers (2007)</td>
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<td>RULES VERSUS ASSOCIATIONS</td>
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<tr>
<td>7 -Oct 1/3</td>
<td>Rules versus associations: regular versus irregular morphology</td>
<td>Connectionist models: using TLEARN to make and train a model</td>
<td>Ward Ch 1 p. 5-9; Ch 9 181-187 Ulman (2001); Pinker &amp; Ullman (2002); McClelland &amp; Patterson (2002); Plunkett &amp; Elman, Chapters 1 and 3 (e-book)</td>
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<tr>
<td>8 -Oct 8/10</td>
<td>Rules versus associations: reading and dyslexia</td>
<td>Connectionist models: using TLEARN to make and train a model</td>
<td>Ward Ch 12; Gabrieli (2009); Plunkett &amp; Elman (e-book)</td>
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<td>9 -Oct 15/17</td>
<td>Sentence level processing; Sentence level processing Q&amp;A session Test 2 Final projects: find topic Final projects: find references</td>
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<td>Kaan &amp; Swaab (2002); Ward Ch 11, p. 245-251; Ward Ch 14.</td>
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<td>RIGHT /LEFT HEMISPHERE</td>
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<td>11 -Oct 29/31</td>
<td>TBA</td>
<td>Language acquisition/ bilingualism</td>
<td>Ward Ch 14; 16</td>
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<td>Date</td>
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<td>12-Nov 5/7</td>
<td>TBA Draft of paper due</td>
<td>TBA</td>
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<td>13-Nov 12/14</td>
<td>Language acquisition/bilingualism Hand in proof of experimental participation</td>
<td>Poster presentations</td>
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<td>TBA</td>
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<td>14-Nov 19/21</td>
<td>Poster presentations RH functions</td>
<td>More RH functions</td>
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<td>Jung-Beeman (2005)</td>
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<td>Campbell (2006)</td>
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<td>Schirmer &amp; Kotz (2006)</td>
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<td>15-Nov 26</td>
<td>Q&amp;A session Test 3 Wrap-up, TBA</td>
<td>NO CLASS</td>
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<td>16-Dec 3</td>
<td>Test 3 Final paper due Dec 10</td>
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**Course Readings available on-line (e-journals, course website)**  
* = highly recommended, but optional  