LING 5346 *Topics in Applied Linguistics: Research and Experimental Design*
Spring 2016

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Office Hours: Tuesday 2-3 (or by appointment)

Section Information: LING 5346-001

Time and Place of Class Meetings: Tuesday, Thursday 12:30PM - 1:50PM, TH 01

Description of Course Content: In this class, we will examine a range of topics in experimental linguistics and psycholinguistics, with particular emphasis on experimental design and useful methodological tools. Students will also practice designing experiments related to their research interests.

Student Learning Outcomes: After successfully completing this class, students will be able to:

(1) create and analyze the results of linguistic/psycholinguistic experiments using freely available research tools;
(2) identify appropriate experimental methods for various linguistic/psycholinguistic research questions;
(3) critically assess the research and experimental designs of linguistic/psycholinguistic studies;
(4) create complete experimental designs that address a range of linguistic/psycholinguistic research questions.

Required Textbooks and Other Course Materials: All materials will be posted on the Blackboard site (https://elearn.uta.edu/webapps/login/) for the course. You are responsible for checking this site regularly to access (among other things) class notes, updates, readings, and grades as well as the course Discussion Board.

Descriptions of major assignments and examinations:

--Article presentations (4): during weeks 2-11, depending on the topics you choose
--Reading comments/questions (10): uploaded no later than the night before the associated article presentation
--Experimental tool/technique tutorial (1): on 2/2, 2/18, 2/25, 3/29, 4/5, 4/14, depending on the tutorial you choose
--Research design project: see the detailed description below

Attendance: At The University of Texas at Arlington, taking attendance is not required. Rather, each faculty member is free to develop his or her own methods of evaluating students' academic performance, which includes establishing course-specific policies on attendance. In this class, two or more unexcused absences will result in points being deducted from your final course grade.

Grading: Your grade on each component of the class will be determined on the basis of the percentage of points earned to points possible: 100-90% = A, 89-80% = B, 79-70% = C, 69-60% = D, 59-0% = F. Your final grade will be determined in the same fashion but taking into account the weightings listed below:

Article presentations	25%	
Reading comments/questions	10%	
Experimental tool/technique tutorial	15%	
Research design project	50%	
Research proposal		10%
Design Presentations		30%
Final Research Design		10%

Article presentations. Four times during the course, you will present on an article (~15 minutes) and lead class discussion related to it (~10 minutes). Your article should relate to the method of interest for the class. It should (i) report on a study that uses the method to investigate a specific research question, (ii) present an empirical investigation into the method, or (iii) review the literature related to the method. In presentations related to empirical investigations of/using a given method (i.e., articles of type (i) and (ii) above), you should minimally provide the general question(s) examined, the specific research questions/hypotheses (with reference to sample items), a summary of the methodological details (e.g., # of participants, relevant details related to the materials, the experimental procedure, etc.), a summary of the findings (including a discussion of what these findings mean with respect to the research questions), and your comments/critique, with particular emphasis on the design of the study and its methods. Important: Do not get bogged down in a detailed discussion of the statistical analyses/results. It is sufficient just to point out the relevant results as they relate to the main research questions. For literature review articles (i.e., articles of type (iii) above), you should try to distill the points in the article into a set of recommendations (or best practices) for using the method of interest. For all of these presentations, you should also do your best to address the questions raised by your classmates on the Blackboard Discussion Board. A sign-up sheet for these presentations will be posted online. Please submit your e-article to me early enough so that you can get approval and so that it can be uploaded onto the Blackboard site at least one week prior to your presentation.

Reading comments/questions. You should endeavor to read all of the articles that will be presented by your classmates. In advance of (at least) ten of these presentations, you should read the relevant article carefully and come up with 1-2 substantive comments/questions. These comments/questions should be posted on the Blackboard Discussion Board no later than 5pm on the day before the associated presentation.

Experimental tool/technique tutorial. You will lead one tutorial on a methodological tool/technique. These tutorials will be as follows (see the Projected Course Schedule below):

(2/2) – TUTORIAL 1: Qualtrics
(2/18) – TUTORIAL 2: masked priming in DMDX
(2/25) – TUTORIAL 3: auditory lexical decision in DMDX
(3/29) – TUTORIAL 4: self-paced reading in DMDX
(4/5) – TUTORIAL 5: CheckVocal for response latency and accuracy measures
(4/14) – TUTORIAL 6: generating ERPs using ERPLAB

In these tutorials, you will illustrate how to use these tools/techniques to create experiments (tutorials 1-4) and analyze data (tutorials 5-6). Your tutorial should include a step-by-step explanation how to use the tool/technique to conduct linguistic/psycholinguistic studies. This explanation should be supported by activities and materials that will allow your classmates to test out the tool/technique. (That is, this should not just be a lecture; your classmates should have opportunities to “get their hands dirty.”) Please meet with me at least a week in advance of your tutorial to discuss your plans for the session, and I will help you develop and fine-tune your ideas.

Research design project. On Friday 2/19, you will submit a research proposal. This proposal should be no longer than one page (single-spaced). It should outline the theoretical motivation for a line of research with reference to 1-3 key articles, concluding with a set of research questions. Once this research proposal has been approved, it will be made available to rest of your classmates. For this project, you then create research designs (i) for your research proposal and (ii) for two of your classmates' research proposals (which you will select). These designs should include (i) sample item sets (i.e., items that illustrate the conditions of interest), (ii) specific research hypotheses (with reference to your conditions/sample items), (iii) a clear description of your methods (including participants, materials, and procedures), and (iv) a "projected results" section (i.e., a section that illustrates how the results should look if they are consistent with your hypotheses). You will present these designs during the last three weeks of the semester. (Please create a handout for each of these presentations. That will make it easier for the class to discuss and compare the different research designs.) For your final paper, you will write a complete design related to your original research proposal, taking into consideration the issues raised during the presentation and discussion of all three of the designs that were created to address this proposal.

Projected Course Schedule

On dates with asterisks, there will be two article presentations.

Week 1a (1/19) – introduction / general research design characteristics

Week 1b (1/21) – general research design characteristics (cont.)

Week 2a (1/26) – research ethics / IRB protocols

Week 2b (1/28)* – grammaticality judgments / ratings (acceptability, plausibility, etc.)

Week 3a (2/2) – TUTORIAL 1: Qualtrics

Week 3b (2/4)* – processing of words with different characteristics

Week 4a (2/9) – NO CLASS

Week 4b (2/11)* – lexical processing: item selection / characteristics of words/nonwords

Week 5a (2/16)* – visual lexical decision / masked priming

Week 5b (2/18) – TUTORIAL 2: masked priming in DMDX

Research proposal due 2/19

Week 6a (2/23)* – auditory lexical processing

Week 6b (2/25) – TUTORIAL 3: auditory lexical decision in DMDX

Week 7a (3/1)* – interference methods (e.g., Simon task, Stroop task)

Week 7b (3/3)* – measures of individual differences: attention, working memory

Week 8a (3/8) – eye tracking with auditory stimuli (guest lecturer: Daniel Scarpace)

Week 8b (3/10)* – eye tracking during reading

Week 9a (3/15) – NO CLASS [Spring Break!]

Week 9a (3/17) – NO CLASS [Spring Break!]

Week 10a (3/22)* – pupillometry

Week 10b (3/24)* – reading methods: self-paced reading and maze task

Week 11a (3/29) – TUTORIAL 4: self-paced reading in DMDX

Week 11b (3/31)* – production methods (e.g., naming, picture naming, fragment completion)

Week 12a (4/5) – TUTORIAL 5: CheckVocal for response latency and accuracy measures

Week 12b (4/7)* – electroencephalography (EEG) / event-related potentials (ERPs)

Week 13a (4/12) – EEG demonstration

Week 13b (4/14) – TUTORIAL 6: generating ERPs using ERPLAB

Week 14a (4/19) – Design Presentations

Week 14b (4/21) – Design Presentations

Week 15a (4/26) – Design Presentations

Week 15b (4/28) – Design Presentations

Week 16a (5/3) – Design Presentations

Week 16b (5/5) – Design Presentations

Final paper due 5/12

As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course. –Jeffrey Witzel.

Late Submission of Assignments: Late assignments may be accepted (at the instructor's discretion) but with a grade penalty. Assignments that are submitted late are unlikely to be returned to you in a timely manner, and they will not receive the same amount of feedback as an assignment handed in on time.

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://wweb.uta.edu/aao/fao/).

Disability Accommodations: UT 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), The Americans with Disabilities Amendments Act (ADAAA),* and *Section 504 of the Rehabilitation Act.* 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 disability. Students are responsible for providing the instructor with official notification in the form of a letter certified by the **Office for Students with Disabilities (OSD).** Students experiencing a range of conditions (Physical, Learning, Chronic Health, Mental Health, and Sensory) that may cause diminished academic performance or other barriers to learning may seek services and/or accommodations by contacting:

The Office for Students with Disabilities, (OSD) www.uta.edu/disability or calling 817-272-3364.
Counseling and Psychological Services, (CAPS) www.uta.edu/caps/ or calling 817-272-3671.

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 or by calling the Office for Students with Disabilities at (817) 272-3364.

Title IX: *The University of Texas at Arlington does not discriminate on the basis of race, color, national origin, religion, age, gender, sexual orientation, disabilities, genetic information, and/or veteran status in its educational programs or activities it operates. For more information, visit uta.edu/eos. For information regarding Title IX, visit* www.uta.edu/titleIX.

Academic Integrity: Students enrolled all UT Arlington courses are expected to adhere to the UT Arlington Honor Code:

> *I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.*
>
> *I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.*

UT Arlington faculty members may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents' Rule* 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) 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.

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" shall be directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit http://www.uta.edu/sfs.

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 *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

Emergency Exit Procedures: Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit, which is located immediately to your right as you exit the classroom. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist individuals with disabilities.

Student Support Services: 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 visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at http://www.uta.edu/universitycollege/resources/index.php

The English Writing Center (411LIBR): Hours are 9 am to 8 pm Mondays-Thursdays, 9 am to 3 pm Fridays and Noon to 5 pm Saturdays and Sundays. Walk-in ***Quick Hits*** sessions during all open hours Mon-Thurs. Register and make appointments online at http://uta.mywconline.com. Please see www.uta.edu/owl for detailed information.

Librarian to Contact: Jody Bailey (jbailey@uta.edu)