METHODS IN PSYCHOLINGUISTICS

LIN 4702C (097D) **LIN 6708C** (1B29)

Tuesdays – Periods 2 & 3 (8:35 – 10-30) – Architecture 120
Thursdays – Period 3 (9:40 – 10:30) – Anderson 19

Instructor: Dr. Wind Cowles

Office: 4131F Turlington Hall
Lab: B-127 Turlington Hall
Phone: (352) 294-7451 **E-mail**: cowles@ufl.edu

Office Hours: Tuesday Noon – 1:30
Wednesday 1 – 2:30
Thursday 1 – 3

Course description:
In this class, students will learn how to design and implement psycholinguistic experiments using various experimental paradigms. These include lexical decision, sentence production and self-paced reading experiments. Students will also learn how to analyze and interpret data obtained from such experiments. In addition, introductions will be given to methodologies using electrophysiology, eye-tracking and fMRI technologies. Computer software programs necessary for the stimulus presentation and data analysis, such as PsyScope and R, will be covered. The course will conclude with a final project in which students are required to run a small experiment of their own design. Results of the experiments will be presented and discussed with the rest of the class.

Prerequisites:
Psycholinguistics or Advanced psycholinguistics; at least one statistics course.

Aims of this course:
- To learn what is involved in doing psycholinguistic experiments, and what pitfalls to avoid.
- To learn to use software used for stimulus presentation, data acquisition and data analysis.
- To improve problem solving skills
- To improve presentation skills and team work

Grading:

Your grades will be based on:	Undergraduates:	Graduates:
Attendence & Participation	10%	10%
Homework (including case studies)	15%	15%
Participation in LIN/CD experiments and report:	10%	N/A
Midterm exam:	25%	25%
Group project –Final written assignment:	25%	25%
Group project –Poster presentation:	15%	15%
Paper critique:	N/A	10%

Grading scale:			
	88-90.9 A-	91-100 A	
	78-80.9 B-	81-84.9 B	85-87.9 B+
	68-70.9 C-	71-74.9 C	75-77.9 C+
	58-60.9 D-	61-64.9 D	65-67.9 D+
	Below 58 E		

A grade of C− is not a qualifying grade for major, minor, Gen Ed, or College Basic distribution credit. For further information on UF's Grading Policy, see: http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html http://www.isis.ufl.edu/minusgrades.html

Other Policies:

- Please silence all cell phones during class.
- Emailing, web browsing and other computer activity is not allowed during class unless this is part of the course assignments.

Attendance, Absence, and Make-up Work Policy:
Attendance is required and students will sign in at each class meeting.

An absence is considered excused if there is an acceptable reason according to UF policy (catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx). Examples of acceptable reasons are medical illness, religious holidays, and military obligation. Please notify me as soon as possible of an excused absence.

Otherwise, absences will be considered unexcused and your attendence/participation grade with be dropped by one-third letter grade (e.g. A to A-) for each unexcused absence.

Any work (e.g. homework, exam) missed because of an excused absence may be made-up or turned in late for full credit, I will work with you to find a due date that will ensure you don't fall behind. Late or work missed because of an unexcused absence may be made-up or accepted at my discretion, with a small grade penalty.

Teamwork Policy:
Science is, for the most part, a collaborative endeavor. While all written work must be your own, you are *encouraged* to work together on case studies, homework, and project activites. Academic honesty includes giving appropriate credit to collaborators. Although collaboration is encouraged, collaboration should not be confused with writing up the results of a classmate's work - this is *unacceptable*. If you work as a part of a group, you should indicate this at the top of your assignment when you submit it.

For academic honesty guidelines, see the following website: ww.dso.ufl.edu/judicial/procedures/honestybrochure.php.

Homework and Case Studies:
In the lab sessions you will obtain hands-on experience with running, designing, analyzing and interpreting data from various types of psycholinguistic experiments using PsyScope and R. Some lab sessions will require outside work, to be submitted before the next session. Also, many weeks we have a discussion of a case report. Written/typed answers to the case report need to be turned in after this discussion and you will be told in advance when the case study will be discussed.

Midterm Exam:
One take-home, midterm exam is planned to test your knowledge of designing, running and analyzing an experiment before starting your group project.

Paper Critique (graduate students only):
Graduate students are required to select 5 papers and evaluate the use of the experimental methods in the studies found. This should result in an 8-10 page paper containing (a) the bibliographical information; (b) a summary of the method and findings; (c) an evaluation of the experimental design and technique. This report should be handed in together with, or before the final group project paper.

Participation in LIN/CSD experiments (undergraduate students only):
To encourage awareness of different aspects of experimental research in language-related fields, you are required to participate in either 2 hours or 2 experiments of language/communication research during the semester. A list of experiments that qualify for this credit can be found at **http://users.phhp.ufl.edu/jjreilly/pool/pool.html** . This site will be updated throughout the semester. After participating in the study or studies, please write a 3-page description of the methods and goals of the study or studies you participated in, as well as any comments you have about these. You may

have to discuss the study with the experimenter in order to complete this! Include a copy of the IRB form with your write-up when you turn it in. Reports must be turned in **no later than April 23rd** for you to receive credit. This assignment will be worth 10% 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 two short research articles and writing a 2 page critique of their methods for each of them. 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 me.

Final group projects:
The course is concluded with a group project. Groups can choose among the topics provided by the instructor later in the course, or choose their own topic in discussion with the instructor. Students will design and conduct an experiment, and report their findings in (a) a final laboratory report, structured like a journal article, that will be **due April 27th** and (b) a poster presentation to be presented in class in a "poster session" like environment scheduled in class for **April 24th**. Many more details on this project will be covered later in the course.

Accommodations for students with disabilities:
Students requesting classroom accommodation must first register with the Dean of Students Office http://www.dso.ufl.edu/drp/. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

Readings:
Readings will be made available on Sakai and should be completed before the Tuesday class of the week that they are assigned to (except for Week 1, where the reading should be finished by Thursday's meeting).

Overview of the course (subject to change):

Week (of)	Topics	Readings	Assignments
1 (Jan 7)	**Lecture:** Intro to course **Discussion**: Design considerations **Lab:** Intro to Mac OS X & PsyScope	Dunbar (2005), Chapter 1	
2 (Jan 14)	**Lecture:** Experimental design & IRB **Discussion**: Case Study #1 **Lab:** Creating experiments in PsyScope Lexical decision experiment	Goodwin, Chapters 7 and 8	Case Study #1
3 (Jan 18)	**Lecture:** Materials **Discussion:** Case Study #2 **Lab**: MRC database & CELEX	Stowe & Kaan, Chapter 3 and 4	Case Study #2
4 (Jan 21)	**Lecture**: Statistics **Lab:** Intro to R; t-test ANOVA Analyzing lexical decision data Repeated measures	Stowe & Kaan, Chapters 5 and 6	Homework #1
5 (Jan 28)	**Lecture**: Group differences: Working with different populations **Discussion:** Case study #3 **Lab:** Creating Psyscope experiments	Gollan, Bonanni, & Montoya (2005)	Case Study #3
6 (Feb 4)	**Lecture:** Self-Paced Reading & Grammaticality Judgments **Lab:** Self-paced reading/judgment	Mitchell (2004)	Homework #2
7 (Feb 11)	**Lectures:** Sentence production **Discussion:** Case Study #4 **Lab:** Sentence production experiments	Bock (1996) Haywood et al (2005)	Case Study #4

Week (of)	Topics	Readings	Assignments
8 (Feb 18)	**Lectures:** Individual Differences: Working Memory and Executive Function **Discussion**: Group Project Ideas **Lab:** Using tests of WM and EF Group Project (Select teams, discuss ideas)	Suchy (2009) Conway et al. (2005)	Homework #3
9 (Feb 25)	**Lecture:** Eye-tracking **Lab:** Group Project (Select hypothesis)	Boland (2004) Rayner & Liversedge (2011)	MIDTERM EXAMS DUE
10 (Mar 4)	**SPRING BREAK**		
11 (Mar 11)	**Lecture:** ERPs **Lab**: Group Project (Design experiment)	Van Berkum (2004)	Homework #4
12 (Mar 18)	**Lecture:** fMRI **Discussion**: Case Study #5 **Lab**: Group Project (Make materials)	TBA	Case Study #5
13 (Mar 25)	**Lecture**: PsyScope scripting help **Lab**: Group Project (PsyScope Scripting)		GP HW – Methods HW
14 (Apr 1)	**Lecture:** Data Analysis help **Lab:** Group Project (Testing)		GP HW – Script HW
15 (Apr 8)	**Lecture:** Conference Poster design & Academic Papers **Discussion**: Case Study #6 **Lab:** Group Project (Testing)	Gravetter & Forzano: Chapter 16	Case Study #6
16 (Apr 15)	**Lab:** Group Project (Analyze data, poster design)		
17 (Apr 22)	**Lab:** Poster Session		