

Psyc 490

Research Topics in the Psychology of Language: Prediction and Learning in Language Comprehension

Instructor: Dr. Jennifer Arnold

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9:30-10:45 Tuesday/Thursday, Davie Rm. 101

Human communication is an everyday occurrence, yet it is one of our most complex cognitive achievements. This upper-level course examines current research on how people manage to understand language successfully, despite uncertainty, ambiguity, and noisy environments. Our special focus for this semester is **prediction and learning**, and how these processes guide understanding. The first goal is to become familiar with current findings and theoretical debates, through readings, writing assignments, and in-class discussion. This conceptual development sets the stage for the major goal of this course, which is to learn research techniques in experimental psychology. Students will develop a novel research question and learn how to set up an experiment, collect data, analyze it, and present the results in both spoken and written format.

Course Objectives

- o gain expertise in one area of research in cognition and language use
- o learn how to read primary articles and critically evaluate scientific reports
- o develop critical thinking skills
- o learn how to participate actively in group discussions
- o practice writing about scientific issues
- o learn how to make effective Powerpoint slides
- o learn how to give effective oral presentations
- o learn how to evaluate scientific work critically

Course Requirements

- o 15% -- Participation. This is a nontraditional, active learning course. This requires you to be present physically and mentally in all classes, and participate in all discussions and activities. Attendance will be taken. Two tardies count as one missed class.
- o 5% -- 5 quizzes or experiment participant assignments (1 point each)

- o 18% -- Paper analyses (n=9, 2 points each). Short summaries and analyses of primary articles assigned.
- o 12% -- Experiment idea papers (n=3, 4 points each). Papers designing new experiments.
- o 20% Group research project assignments (n=10, 2 points each). There are multiple assignments that support the development of your research project. These are done as a group, but each person receives individual grades. Therefore ALL GROUP MEMBERS MUST UPLOAD THE DOCUMENT TO SAKAI.
- o 20% -- Paper based on Research results. You will write up the research project in a 10-page term paper (6 content pages, plus graphs, references, abstract, title page). You are expected to do your own work on this part of the project. This grade will be given individually.
- o 10% -- Group presentation based on Research results. This project will take the place of the final exam. Group presentations will be held in Davie 101 on Tuesday, December 12, 8am.

Exams

This is a project-based learning course. There are no traditional exams.

Group work policy

Much of the work for this class is done as a part of a group. You are expected to maintain a high level of professionalism and responsibility throughout all projects. This includes maintaining good communication with your group-mates about who is responsible for what, keeping good documentation of your work, and showing up to group meetings and class on time and ready to work. If you know that you will be late to class or miss class, you should inform your group mates.

Late work policy

Late work is penalized 5% (out of the assignment total) for every calendar day that it is late, unless an extension was granted ahead of time. No more than 50% of the assignment total can be lost. It is **always** better to turn your work in, even if it is late. It is even better to get organized and turn it in on time. If you have a serious emergency, contact the professor as soon as possible by email (jarnold@email.unc.edu) or phone (919-843-5737) or by sending a note with a friend. If you believe you have a reason for excused late work, you must clear it with the professor in advance.

How will I know how I'm doing in the course?

Grades will be given numerically, out of 100. Your final grade is the average of each course component, based on the following scale (note that the A's are divided differently than the other letter grades):

A = 94-100

A- = 90-93

B+ = 87-89

B = 83-86

B- = 80-82

C+ = 77-79

C = 73-76

C- = 70-72

Etc.

I will try to give you updates about your grades throughout the semester. If you are concerned, please feel free to make an appointment to discuss your participation in the course.

Office hours

I will be in my office on Wednesday afternoons from 2-3; feel free to stop by if you would like to discuss anything. You are also encouraged to set up a meeting at another time if you cannot make my office hour, or to come to class a bit early and talk to me then.

Research in this course

In this research-exposure course, you will be working with a Graduate Research Consultant, Sandy Zerkle, who will assist you in the research project. The GRC Program is sponsored by the Office for Undergraduate Research (www.unc.edu/depts/our). I encourage you to visit the OUR website to learn about how you might engage in research, scholarship and creative performance while you are at Carolina.

Library page

This page provides you with a number of useful links that you can use for this course and other psychology courses.

[library page to be inserted here]

Honor Code

The Honor code is, as always, in effect in this course. *The Instrument of Student Judicial Governance* requires that you sign a pledge on all written work that says “On my honor, I have neither given nor received unauthorized aid on this assignment.” This includes all reading notes, presentations, and projects. The first time you hand in an assignment, I expect you to write out the pledge in full. After that, you may simply write “pledge” and sign your name. Your written assignment will be based on an experiment that you have carried out and discussed with other class members. You are also free to discuss the project with others outside the class. However, the written work you hand in must be yours alone. If you use someone else’s ideas, you must provide a citation. If you aren’t clear about any of this, [ask questions](#).

Schedule of topics, readings, and assignments

(note – this may change during the semester; updates will be announced by email)

Date	What	Due
Aug. 22	Introduction	
Aug. 24	Introduction to language processing	Read Read Sedivy 7.0-7.3 Do quiz Do CITI training
Aug. 29	What is prediction and how does it affect language processing?	Do Cloze experiment Read Staub et al. Write lit summary
Aug. 31	Context, frequency, and expertise effects on sentence understanding	Do Discourse cloze experiment Read Sedivy 8.0-8.4 Do quiz
Sept. 5	Learning and prediction: Relative clauses, Disfluency	Read MacDonald 2015 Write lit summary Do sentence completion task
Sep 7	Guest Lecture: Sandy Zerkle: prediction and pronoun comprehension	Read Nappa & Arnold (2014) write lit summary
Sept. 12	Prediction at the discourse level	Read Rohde & Kehler write lit summary
Sept. 14	How to design a study	Write Experiment Idea 1 paper
Sept. 19	Workshop: Mturk demo (design and data management)	Read Free choice paper

		Write lit summary
Sep. 21	Workshop: Mturk demo (data and analysis)	Read Free choice paper Write lit summary
Sep 26	Prediction and discourse inferences	Do narrative prediction experiment Write Experiment idea 2 paper
Sep. 28	Discussion: experiment ideas	Write Experiment idea 3 paper
Oct. 3	Discussion: finalize project ideas	Read Free choice paper Write lit summary
Oct 5	Workshop: experiment design	Write: Groups, topics, and readings assignment
Oct 10	Ethics in research	Write: Final design; include timeline for specific projects and a description of part 1 and part 2 of data
Oct 12	NO CLASS – UNIVERSITY DAY	
Oct 17	The value of a model: identifying alternate models to explain a process	Turn in: Materials for experiment
Oct 19	NO CLASS – FALL BREAK	
Oct 24	Workshop: Excel techniques for organizing and coding data	Write: Research background paper lit summary 1 due
Oct 26	TBA	Write: Research background paper lit summary 2
Oct. 31	Workshop: Data management and coding	Turn in: Data collection part 1 due
Nov 2	Workshop: Data management and coding	Turn in: Data collection part 2 due
Nov 7	Writing an introduction	Write: Literature summary due
Nov 9	Workshop: How to do statistics in Excel (t-test, chi-square, correlations)	Turn in: Coded/organized data due
Nov 14	Workshop: Data Analysis	Write: Introduction due
Nov 16	Workshop: Data Analysis	Write: Methods due
Nov 21	In-class conferences	Write: Results due Do: Peer evaluations due
Nov 23	THANKSGIVING	
Nov. 28	In-class conferences	Introductions returned
Nov 30	How to give a good presentation	Write: Final Paper due

Dec 5	Workshop: presentations	
FINAL EXAM	Group presentations	