Research Methods in Language (82800)

Description
This course will examine issues in research design and methods as they are specifically related to the study of language and related cognitive abilities. We will cover methods that examine language production and spoken language comprehension including lexical access and organization, morphosyntactic, and syntactic processing. The methods will include behavioral computer-based tasks (e.g., priming, cross-modal priming, picture word interference, and other dual tasks), eye tracking, event-related potentials, imaging, and language sample analyses.

Class Requirements:
Students will be required to write two article critiques (max 2 pages). The critiques should include a brief summary of the empirical or theoretical issue addressed, methodology, findings, and conclusions. Each aspect of the article should be considered critically. The articles should use different methods. (2) Topic for research proposal (one page) including a statement of the problem, controversy, or question. (3) Research proposal includes literature review (7-10 pages), proposed method, and proposed data reduction. Literature review. Methods and data reduction are due last day of class. Follow APA (6th) publication style. (4) Students will be responsible for 2 brief presentations.

Reading

Research articles and review chapters to be assigned

I. Overview/Research Design
   a. Formulating experimental questions
   b. Designs that answer experimental questions
   c. Variables and Confounds
   d. Quasi Experimental Design
   e. Threats to Validity
   f. Single-subject design
g. Statistical Considerations
h. An overview of tasks

II. Some Tools
   a. E-Prime and other experimental software
   b. Statistical packages
   c. Language Sample Analysis

III. Language Sampling
   a. Collecting Language Samples
   b. Analyzing Language Samples
      i. Phonology
      ii. Morphology
      iii. Syntax
      iv. Discourse/Narratives

IV. Behavioral Psycholinguistic Tasks—Comprehension
   a. Phonology
   b. Lexical/Semantic
   c. Syntax
   d. Attention, Memory, Executive Functions
   e. Sample Studies

V. Behavioral Psycholinguistic Tasks—Production
   a. Phonology
   b. Lexical/Semantic
   c. Syntax
   d. Sample studies

VI. Eye Tracking
   a. Visual System 1-4
   b. System 9-12
   c. Methods 13-15
   d. Sample studies

VII. ERPs and Imaging
   a. Introduction and set-up 1, 8
   b. Design and interpretation 2
   c. Basic Principles 3
   d. Data Conditioning and Analysis 4, 5, 6
   e. Localization 7
   f. Sample Studies

VIII. Statistical Approaches
   a. Multi-level Modeling
   b. HLM
Learning Goals:
1. Students will be able to consider quasi and non-quasi experimental design in the evaluation of published research and understand threats to validity in their own research designs.
2. Students will learn the relative advantages and disadvantage of experimental software to design and conduct psycholinguistic experiments.
3. Students will gain experience in evaluating research methods in published language research.
4. Students will learn the principles, strengths and weaknesses of various methods used to study language and related processes.