

## **Psychology 353: Laboratory in Cognition and Memory**

**Spring 2016: CRN 20289 and CRN 27534**

**MW 3-4:50**

**Classroom: 2057 BSB**

**Course Information:** 3 hours. Prerequisite(s): PSCH 343, and credit or concurrent registration in PSCH 352. To be properly registered, students must enroll in both Lecture/Discussion and Laboratory parts of the course. Only registered students may attend. Completion of PSCH 352 is expected so that you have the necessary background knowledge for the laboratory course. If you are currently taking 352, you will need to read chapters from your textbook in advance to have enough background for the activities we do in this laboratory. Use the index to find the chapter in your textbook that the articles are discussed in once articles are announced.

**Registration Restriction:** Restricted to Neuroscience or Psychology major(s).

### **Instructor: Jennifer Wiley**

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Office Hours: Wed 11-12 or by appointment

### **TA: Tim George**

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Office Hours: Thurs 2-3 or by appointment

### **Purpose of Course**

The purpose of this course is to give students first-hand experience with experimentation in cognition.

For the first part of the course, students will gain experience in running experiments in cognitive topics including memory, language, text comprehension, problem solving, reasoning or decision making. For each experiment, students will act as participants and then take the role of researchers responsible for entering and interpreting data, and reporting experimental results in APA format. Students will learn the background for each experiment by reading original research articles, discussing the articles in terms of the ideas that they introduce to predict results, and examining how those predictions relate to our own results. Students will have hands-on experience with data collection, data entry in Excel, data analysis in SPSS, and guided instruction on writing each section of the APA style report for the actual experiments that we run in class. For the second part of the course, students (either alone or in pairs) will be responsible for researching a topic of their choice, designing and proposing their own cognitive experiment, collecting data, analyzing data, writing a full APA style manuscript about their study, and presenting their results in a poster at the end-of-semester poster fair.

This class is designed to be of interest to students who are considering graduate school in experimental psychology, but it will be useful to any student who enjoys the topics of human learning, memory and problem solving, and wants to better understand the nature of cognitive research. More generally, a background in cognitive experimentation is good experience for students who are considering a wide range of careers in areas including education, learning

sciences, law, business, medicine, and neuroscience. This course does require students to be highly self-motivated as they propose and complete their projects during the second half of the semester.

**Journal Articles:**

Readings will be original journal articles that will be assigned once students have participated in each experiment. They will be available through UICCAT online journal subscriptions.

**Strongly Recommended Text: APA Publication Manual (6th edition; 2009).**

All of your assignments MUST conform to APA style. This publication manual is recommended but not required for purchase. If you are considering pursuing a graduate degree in psychology, you might as well buy it now. For others, this book is on reserve at the library and you may wish to make copies of important pages to help you keep to style. If you do decide to buy it, online merchants are usually cheaper than the UIC bookstore.

**Grading**

Grades will be determined by the following:

- 30% Participation in in-class experiments and laboratory activities
- 20% Quizzes on readings
- 30% Written Assignments
- 20% Final Project

**No make-up quizzes will be given.**

**No late papers will be accepted.**

**The University recognizes a student's responsibility for attending classes as constant.**

**In case of emergencies, contact the instructor as soon as possible.**

**This is a fast-paced laboratory course with many in-class exercises. Students will not be able to earn credit for missed activities due to late registration or absences.**

**Students joining the course after the end of the second week of classes will have already missed the opportunity to earn a large percentage of available points.**

**Students with Disabilities:** Reasonable accommodations will be made, but requests must be made **during the first week of class**. Students with disabilities who require accommodations for access and participation in this course must be registered with the Office of Disability Services (ODS). Please contact ODS at 312/413-2103 or 312/413-0123.

**Campus Policy on Observance of Religious Holidays:** Students who wish to observe their religious holidays shall notify the faculty member **by the tenth day of the semester** of the date when they will be absent unless the religious holiday is observed on or before the tenth day of the semester. In such cases, the student shall notify the faculty member at least five days in advance of the date when he/she will be absent. The faculty member shall make every reasonable effort to honor the request, not penalize the student for missing the class, and if an examination or project is due during the absence, give the student an exam or assignment equivalent to the

one completed by those students in attendance. If the student feels aggrieved, he/she may request remedy through the campus grievance procedure.

**Plagiarism/Cheating:** Plagiarism is defined as the use (or submission) of another's ideas, thoughts, or writing, without proper acknowledgment (quotation marks and citations). If you are ever unsure about what constitutes plagiarism, attend the TAs office hours. Bring examples of your writing and the original article, and ask the TA for guidance. When you are composing a new research paper and reading and discussing other research papers in it, be sure to use your own words to describe the gist of other studies or other author's explanations. Make sure that you discuss other papers in a way that supports the point you are making in your own paper. This is one good way to avoid using someone else's words. If you must use a direct quote or wording from a paper you are reading, then use quotation marks. It is rare that you should have to do this in writing research papers, except for when you are reporting exact instructions that were used in previous experiments in a method section. In almost all other cases, you should be paraphrasing or summarizing other articles. When you paraphrase or summarize another paper do not use quotation marks, but when describing what was found in a previous study or suggested by a previous author, you must cite the source in APA style.

You may discuss our readings, experiments and findings with other students in the course. But, be sure to write your own assignments. **Do not copy another student's assignments. This is plagiarism. Do not share your writing assignments with other students. You will also be considered at fault even if another student uses your work without your knowledge. Do not give others to opportunity to cheat off of your work.**

Any form of plagiarism or cheating (misrepresentation of another's work or answers as your own) will not be tolerated. Students who are found to have plagiarized work or cheat on any assignment will be subject to various disciplinary actions including a failing grade on the particular assignment, failure of the entire course, and possible expulsion from the University. For more information about the violation of Academic Integrity and its consequences please see the UIC Department of Student Judicial Affairs (<http://www.uic.edu/depts/sja/integrit.htm>).

## Course Schedule

Jan 11      Introductory remarks, Review of Syllabus, Overview of Class

            Discussion of Five Key Questions (these are the questions that will appear on all quizzes to test your understanding of each experiment we read):

1. What is the main theoretical question that is being tested in this study?
2. What was the manipulation or what defines the groups of participants? (IV)
3. What was measured? What task did participants do? (DV)
4. What happened (how did the IV affect the DV)?
5. What does this empirical result mean? How does this result relate to the main theoretical question?

            Participate in Experiment 1

            Overview of APA Style: [Manuscript Order](#) [Example APA Style Paper](#)  
            Lecture on [APA Style for Method](#)

[Example Method and Detailed Specifications](#) from APA Manual

Take detailed notes on Method for Experiment 1

Reading Assignment 1: [Auble & Franks, 1978](#) (quiz questions 2, 3, and 4 will be on Experiment 1)

Jan 13 Quiz on Reading Assignment 1  
How to read a journal article BRING A HARD COPY OF THE ARTICLE TO CLASS WITH YOU  
Walk through article, background, and predictions for Experiment 1  
Discuss Method and Exact Running Procedure  
Data Collection Assignment: Collect data in Experiment 1 from friends/relatives before next class

APA Style (Continued) Abstract, Title Page, Methods, References  
Lecture on [APA Style for Title Page/Abstract](#) [APA Style for References](#)  
Examples [Method and References](#) [Title Page/Abstract](#)  
[More General APA Style](#) points

Jan 18 NO CLASS, MLKJR DAY

Jan 20 Score data (BRING NEW DATA TO CLASS)  
Enter data in Excel  
Intro to SPSS, Descriptive and Inferential Statistics, [Worksheet](#)  
Analyze and Discuss findings

APA Style (if needed) Abstract, Title Page, Methods, References

Writing Assignment 1: Title Page, Abstract, Methods, References for Experiment 1  
[Grading Checklist for Writing Assignment \(Title Page Abstract Methods References\)](#)

Jan 25 Writing Assignment 1 Due (through Blackboard and bring hard copy to class)  
APA Style Discussion  
Participate in Experiment 2

[Reading Assignment 2:](#)

Smith, S. M., Ward, T. B., & Schumacher, J. S. (1993). Constraining effects of examples in a creative generation task. *Memory & Cognition*, 21, 837-845.

Jan 27 Quiz on Reading Assignment 2 (Focus on Experiment 1 for questions 2, 3, 4)  
Walk through article, background, and predictions for study BRING A HARD COPY OF THE ARTICLE TO CLASS WITH YOU  
Data Coding Discussion  
Data Coding Assignment: Code data using rubric and fill in excel sheet before next class

Feb 1 REVISÉ Writing Assignment 1 Due (through Blackboard and bring hard copy to class)  
Interrater Reliability Discussion  
Compute Interrater Reliability using ICC  
Finalize Data  
Lecture on [APA Style for Results \(and Coding section of Methods\)](#)  
Example [Results](#)  
See article for example scoring section at start of results.

Feb 3 Analyze data with [worksheet](#)

Feb 8 Discuss Findings  
Be sure to compare our results to the original paper. What did we replicate? How did the new variable come out?  
How to make Tables ([worksheet](#))  
Example [Table 1](#)  
APA Standard Abbreviations: [Measurement Statistical](#)

Feb 10 [How to make Figures and Graphs in Excel](#)  
Example [Figure](#)  
Recap: General APA Style and Results sections

Writing Assignment 2 -- Title, Abstract, Results, References, Table for one results AND Figure for another result (or examples of toys)  
[Grading Checklist for Writing Assignment 2 \(Title Page, Abstract, Results, References, Table and Figure\)](#)

Feb 15 Writing Assignment 2 Due (through Blackboard and bring hard copy)  
APA Style Discussion  
Participate in Experiment 3

[Reading Assignment 3](#): DO NOT READ UNTIL AFTER CLASS

Feb 17 Quiz on Reading Assignment 3  
Walk through article, background, predictions BRING A HARD COPY OF THE ARTICLE TO CLASS WITH YOU  
[How to write introductions to articles](#)  
How to find articles for your introduction (with [worksheet](#))  
ARTICLE ASSIGNMENT: Find an article relevant for writing an introduction to Experiment 4 and submit APA style refs and pdf of article to TA

Feb 22 Analyze data using [worksheet](#)  
Discuss results  
[How to Present Article Summaries](#)

Feb 24 Article Presentations: Summarize a relevant article for the class  
(5 minutes per student)

Writing Assignment 3: title, abstract, intro and reference section for Experiment 4  
(Your paper must cite 3 journal articles in the introductory section)  
[Grading checklist for Writing Assignment 3 \(Title Page, Abstract, Introduction, References\)](#)

Feb 29 Writing Assignment 3 Due (through Blackboard and bring hard copy)  
How to pick a project - [Project worksheet](#)  
[How to write a proposal](#)  
Assignment: Decide on a topic/IV/DV for your project (you can either work alone or with a partner)  
Complete one worksheet per project  
When worksheet complete email answers to instructor and she will schedule meeting (during normal class times in her office).

Mar 2 Meetings with Instructor to discuss approve projects.  
Following meeting, develop script/exact running procedure and exact stimuli.  
Classroom will be available to work on Proposals/Worksheets

Mar 7-11 Pilot project on atleast 2 people (each) to test stimuli, script, data collection, data coding (bring pilot data to TA meeting)  
When you are happy with your materials, email TA to schedule a meeting.  
Bring exact stimuli and script (all materials) to TA meetings (during normal class time in TA office).  
Meet with TA to proof and finalize Experiment Materials and Running Procedure (so TA can administer your experiment)  
Following meeting, finalize proposal.

**Mar 14-18** Full written proposal due to TA by Friday March 19  
Proposal should be submitted through Blackboard.  
FINAL and EXACT COPIES of all running materials should be submitted to TA.  
[Proposal Grading Sheet](#)

Mar 21-25 Spring Vacation. No Classes.

Mar 28, 30 Participate in Data Collection

Apr 4 Participate in Data Collection

Apr 6 Data returned, lab open for data entry, coding and analysis [worksheet](#)  
Discussion how to revise into Final Reports (Full APA Style Papers)  
[Gradesheet for New Sections of Final Paper](#)

- Make revisions based on comments on your proposal (discussion of common issues)

- Change future to past tense
- Clean up your method section with exact numbers and procedures, including coding and exclusion of outliers
- Remove proposed analyses section
- Add the results and discussion section, and a figure of your results.
- Update your reference section for any new citations
- Proofread CAREFULLY
- Compare your revised proposal to the APA grading sheet and make sure you have all required elements and have used correct APA style

Use this special [APA Checklist](#) to check your APA style -- please complete checklist and submit with your paper.

Discussion about important elements in Posters

[How to present your poster](#)

Poster Templates at Makesigns.com

[http://www.makesigns.com/SciPosters\\_Templates.aspx](http://www.makesigns.com/SciPosters_Templates.aspx)

Apr 11 Participate in Data Collection (if needed, or lab open for data entry, coding, analysis, manuscript/poster prep)

Apr 13, 18 BRING POSTER DRAFT TO CLASS one of these days (REQUIRED)  
Lab open for data entry, coding, analysis, manuscript/poster prep

Apr 20 Advice Day  
Applying to Grad School and Letters of Recommendation; Sample Vita

Poster boards available  
Lab open for final poster/MS preparation; consulting

Apr 25 Poster Fair -- Final presentations

Apr 27 Final Papers Due

\*Please do not fill out teaching evaluations until after the poster fair. You need this experience in order to fully judge this course.

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