

Cognition Online Lab

01:830:306:94 Spring 2019

Busch Psychology Building, Rm 105

Weekly Chats: Thursday 5:00 PM – 5:40 PM

In-Class Meetings: January 31 and March 28(?)

Instructor: Sten Knutsen

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Mandatory Online Discussion/Chat Session: Thursday 5:00 PM – 5:40 PM

Office Hours: By appointment.

We will be doing various lab exercises that will give you hands on experience with the research methods and important findings in Cognition. These exercises will give you opportunity to experience some phenomena first hand, as well as the opportunity to generate and test some hypotheses of your own. You'll also be able to improve some basic skills in using software, analyzing data and communicating scientific findings.

Learning Goals

1. Develop scientific thinking skills, including how to form and test hypotheses and how to draw sound conclusions from results.
2. Demonstrate some well-known cognitive and perceptual phenomena by running lab exercises.
3. Learn-by-doing the main research methods of the field.
4. Learn how to analyze data and evaluate hypotheses.
5. Learn research communication skills.
6. Improve computer literacy.

This laboratory class is meant to serve as a companion to the lecture class PSYCH-305. The conceptual and theoretical basis for the exercises and demonstrations are developed in lecture. For this reason, concurrent or past registration in PSYCH-305 is required.



This course has been certified as satisfying four of the Writing and Communication Learning Outcome Goals (including WCR and WCD) of the SAS Core Curriculum

Specifically, students will be able to:

- a) Respond effectively to editorial feedback from peers, instructors, and/or supervisors through successive drafts and revision (WCR);
- b) Communicate effectively in modes appropriate to a discipline or area of inquiry (WCD)
- c) Evaluate and critically assess sources and use the conventions of attribution and citation correctly
- d) Analyze and synthesize information and ideas from multiple sources to generate new insights.

Class website

- All relevant course information will be posted on the Sakai website, including experiment files, powerpoints, instructional videos, and journal articles.
- The class website also has this syllabus and the lab assignments.
- Assignment due dates and submission will all be in the assignment tab.
- All uploaded assignments must be .doc, .docx or .pdf. All uploaded data must be in excel or google sheets.
- Grades will be posted in the gradebook on the website.

Time Management

Note that Rutgers University expects the **median** student to spend 3 hours per week on lab classes. (If you don't remember what "median" is, please ask!) Therefore, you should plan to spend 3 hours per week on this class. You should also be aware that any given week may take you more time if you find the material difficult, or less if you've covered it in previous classes. The great thing about online classes is that these three hours do not have to be all at the same time, or even the same time every week! (There is one exception to the "same time every week": see the section below called "Weekly Sakai Chats")

Please also note that the Lab Coordinator has very carefully chosen assignments such that they will take the median student approximately 3 hours. If the list of assignments one week seems like a lot of individual assignments, that is because most of them will take a short time. If the list of assignments one week seems like short, that is because you are expected to spend more time on each assignment.

Computers

Lab exercises require computers that run either Windows or Macintosh operating systems. Lab software is not compatible with operating systems used on

notebooks, tablets, or iPads. Lab exercises may be run on computers in a university computer lab (see <https://oit-nb.rutgers.edu/service/computer-labs-0> for a list of university computer lab locations). If you choose to run the exercises in a computer lab, be sure to bring a thumb-drive so that you can keep copies of your work. In addition, some of the exercises may require use of headphones.

Important Rules

No electronic recording (audio, video, photos, etc.) of class materials is allowed. No online posting of class material is allowed other than as approved by the instructor.

Data Collection

In this course we are doing lab exercises, not original research. All data for weekly exercises as well as the final project will be collected with either you or your classmates serving as the participants. Collecting data from anyone else (roommates, friends, family members, etc.) is **never** permitted.

Grading

In order to pass this class, you must do the weekly assignments on time. In addition, you must do the final project. If you do not complete either of these aspects of the course, you will automatically fail the course.

Your final grade will be based on three things:

1. Attendance (see Attendance Policy below)
2. Weekly lab assignments (REQUIRED: see above)
3. An original project report completed during the last several weeks (REQUIRED: see above)

Every assignment will count towards your grade. There are no tests or quizzes. Grades for this course will not be curved or scaled.

The criteria for grading your work will be:

- Effort and class participation
- Demonstration of progress in understanding and using software tools
- Clarity of graphs
- Clarity of writing
- Demonstration of understanding basic perceptual concepts introduced in the labs

Final Project

The final project is the writing of a full laboratory report based on an original experiment carried out in class during the final weeks of the semester. These reports will be given a letter grade (A, B+, B, C+, C, D, F).

Weekly Homework

We will be working on exercises – modified versions of well-known experiments in the field of Cognition – at least every week. Sometimes, we will spend two weeks on one of these exercises. In addition to your writing assignments (see next section), you are also responsible for preparing for the chatroom by reading the posted power-points and watching the posted movies. These are the resources you would be shown in class, and you are just as responsible for understanding them as you are in an in-class course. (The great thing about the online version is that you can watch/read them at your own speed, and you can go back as many times as you like.) Make sure you leave yourself enough time to understand the material before the mandatory weekly chats (see below writing assignments).

Weekly Assignments

For each week, you will have small written assignments. Writing assignments will consist of one or more of the following: worksheets about the reading; practice in formatting aspects of the laboratory report; and other, small opportunities to practice the skills needed to write a full laboratory report. The first two or three weeks will include shorter portions of the lab report. These portions will be on methods, raw data, data analysis (graphs, charts, statistical tests, etc.), results and conclusions. In later weeks, assignments will often consist of full portions of the lab report: Abstract, Introduction, Methods, Results, Discussion. You will also be assigned an exercise that practices statistical analysis. These assignments are due weekly.

These assignments will be graded according to a 0 to 3 point scale. If you hand the assignments in on time, you may have the option to rewrite the assignment depending on your grade. You are strongly encouraged to take advantage of this option. The revised version is due within one week of me handing back the graded assignment. The revised report will also be graded. Revising an assignment DOES NOT guarantee you a higher grade: you must still follow the assignment and make the necessary corrections. No revisions will be accepted after this one-week time period, and no subsequent revisions will be accepted after the first revision. However, I will be available to meet with you to discuss the material and your performance.

Assignment grading breakdown:

3 points: Pass-plus: Good to Excellent work, possibly some mistakes, but no rewrite needed. Make sure to apply feedback in future work.

2 points: Pass: adequate work, and you would probably benefit from a rewrite.

1 point: Pass-minus: definite problems or needs improvement; you are likely to do poorly without a rewrite

0 points: Fail, requires redo. Used for both missing/late assignments and “blank” submissions

Weekly Assignment Policy (IMPORTANT):

If you turn in **NO ASSIGNMENTS** for **ANY TWO WEEKS** *or* if you **FAIL ALL ASSIGNMENTS** for **ANY TWO WEEKS**, **YOU WILL AUTOMATICALLY FAIL THE COURSE.**

NOTE: late assignment submissions should be sent to my email.

All laboratory assignments and reports must be completed by the individual student. Collaborative reports will be given an F grade. Please see Academic Dishonesty Policy below.

Late Assignments

If you do not turn in an assignment on time, you will lose the option to revise it. However, you can still receive partial credit if you submit it by the end of the revision period. When the revision assignment has been posted in the Assignments tab on Sakai, late assignments must be submitted there, and the maximum grade you can receive will be a 2 (-1 point penalty). If your late assignment is not submitted by the revision due date it will become an 0 and there will be no further opportunities to receive credit for it.

Extra Credit Assignments

No late extra credit assignments will be accepted. There is no partial credit or resubmission option for extra credit assignments.

Weekly Sakai Chats

Each week, we will have a weekly chat meeting in the chatroom on the class Sakai site. This meeting gives you an opportunity to ask any questions you may have about the experiment/assignment for the week. This is **MANDATORY**, and will determine your participation grade in the course. To receive credit, you must be in the chat room on time, for the entire time, and you must contribute

meaningfully to the discussion. A “meaningful contribution” includes comments such as a question about the material that is not answered in the power-point or the movies assigned, or answering someone else’s question with a reasonable answer. Contributions that will not be counted include comments such as “I understood everything,” or “What did everyone do this weekend?” Each student is required to remain and participate in the chatroom for the full scheduled time.

Attendance Policy

If you miss a chat meeting for a legitimate reason (e.g. illness, religious holiday) you must send an official excuse note (e.g. doctor's note). Missed chats that are not excused will negatively impact your participation grade. ***You must attend the weekly chat meetings on Sakai.*** Not attending prevents you from learning about the goals and content of the lab projects. If you are more than 20 minutes late you will be marked down as having an unexcused absence.

Academic Dishonesty Policy

In science, there is absolutely no room for fraud or untruth. Our job as scientists is to search out facts, not just for ourselves but for society as a whole. Consequently, you should be very clear that, just as I expect you to learn about the topic matter, I also expect you to learn about scientific honesty. In the work that you present to me, falsifying, plagiarism, or copying without attribution will not be tolerated.

Additionally, re-use of assignments from other classes will not be permitted. **IMPORTANT: This includes reuse of your own assignments from this class, if you have already taken this class before.** For instance, if you took Cognition Lab or Sensation and Perception Lab last semester and failed, you cannot turn in assignments you already completed for that semester. **All work you turn in should be done this semester.**

Intentional ethical violations will be handled in accordance with the university’s academic integrity policy. All assignments will be submitted to the Turn-it-in system, where its originality will be verified. Please check the school guidelines for further clarification of violations.

All course materials can be found on <http://sakai.rutgers.edu> after you log in. It is expected that you have reviewed all relevant materials to the week’s assignment prior to our scheduled online chat.

If you decide to stay enrolled in this class after receiving this syllabus, I will assume you have read the entire syllabus and have agreed to all the policies outlined.

TENTATIVE CLASS SCHEDULE

1.19.2019

Week	Date	Content	Stuff Due
1	January 31	<ul style="list-style-type: none"> • First in-class meeting from 5:00 - 5:40 PM, room 105 of Psych building • Assignments released: Excel-lent Exercise, Scientific Methods and Writing exercise 	OPTIONAL: Extra Credit — PsychoPy Installation
2	February 7	<ul style="list-style-type: none"> • First online chat • Discuss any problems/questions regarding Excel exercise • Assignments released: Mental Rotation Data Collection, Mental Rotation Reading Comprehension and Procedure Subsection 	Excel Exercise, Scientific Methods and Writing exercise
3	February 14	<ul style="list-style-type: none"> • Online chat • Assignment released: Mental Rotation Methods, Descriptive Statistics exercise 	Mental Rotation Data Collection, Mental Rotation Reading Comprehension and Procedure Subsection
4	February 21	<ul style="list-style-type: none"> • Online chat • Assignments released: Mental Rotation Results 	Mental Rotation Methods, Descriptive Statistics exercise
5	February 28	<ul style="list-style-type: none"> • Online chat • Assignments released: Inferential Statistics exercise, Citation practice 	Mental Rotation Results
6	March 7	<ul style="list-style-type: none"> • Online chat • Assignment released: Mental Rotation Introduction 	Inferential Statistics exercise, Citation practice
7	March 14	<ul style="list-style-type: none"> • Online chat • Assignments released: Mental Rotation Discussion and Final Project Selection and Reading Comprehension 	Mental Rotation Intro
8	March 21	SPRING BREAK — NO CHAT, NO NEW ASSIGNMENTS	NO ASSIGNMENTS DUE!!!
9	March 28	<ul style="list-style-type: none"> • Second in-class meeting!!! • Assignment released: Final Project Proposal 	Mental Rotation Discussion and Final Project Selection and Reading Comprehension DUE BEFORE IN CLASS MTG (?)
10	April 4	<ul style="list-style-type: none"> • Online chat • Assignments released: Final Project Data and Final Project Methods 	Final Project Proposal
11	April 11	<ul style="list-style-type: none"> • Online chat • Assignments released: Final Project Results 	Final Project Data and Final Project Methods
12	April 18	<ul style="list-style-type: none"> • Online chat • Assignments released: Final Project Introduction 	Final Project Results
13	April 25	<ul style="list-style-type: none"> • Online chat • Assignments released: Final Project Discussion 	Final Project Introduction

Week	Date	Content	Stuff Due
14	May 2	<ul style="list-style-type: none">• FINAL ONLINE CHAT!!: Fill out SIRS survey for participation credit while I grade your Discussion Sections• Assignment released: Final Project Paper	Final Project Discussion Due Thursday before chat
15	May 6	Final Project Paper Due	Final paper due Monday, May 6 @ 5PM