Independent Study Syllabus – COVI Research Lab

Fall 2016

Lab meetings W free period in B1 Armitage

Instructor Information

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Course Overview

The independent study course provides an advanced look at research for students interested in pursuing graduate school and/or a career in research. You will learn about the planning and design of research projects, the process of doing literature reviews, data collection, data entry and preparation, data analyses, and the presentation of research findings. You do NOT need to have experience doing research or in computational methods to be a research assistant in my lab. However, it is expected that you will have already taken, or will be currently enrolled in, Research Methods.

Course Requirements

In order to involved in research in the lab during Fall 2016, you should be aware of the following requirements.

1. In order to earn 3 course units, you are expected to complete about 9 hours of work per week. To get full points, you need to document 100 hours of work towards this course over the semester. (This works out to giving you a couple of "free" weeks during the semester). To document your hours, you will complete an assignment on Sakai every week where you briefly describe the dates and hours that you week. I will look at this each week, and each week you will receive points equal to the number of hours that you work. Your hours should add up to 100 by the end of the semester. Your time sheet each week will go from Monday - Sunday, and you have until Wednesday lab meeting the following week submit your time sheet on Sakai. **Make sure to submit your time sheets by the due date.** If you fail to submit your hours for the week, you cannot submit them late. As time passes, students tend to inflate their hours. **It is your responsibility to complete your required hours or contact me if you need additional work to do.**
2. We will have lab meetings every week on Wednesday during the free period unless otherwise indicated. Please set this hour aside and plan to attend meetings. You will receive points for attending lab meeting (this will also be listed on Sakai). You may also count this towards your weekly time commitment (1 hour). Lab meetings will be a time to learn new information, participate in research design, read papers, and present data to lab members.
3. In order to be involved in research in my lab, you will need to be trained to do various tasks. All students are expected to participate in a variety of tasks; be sure to talk with me if you need to additional tasks. **Before participating in data collection, you need to complete the human subjects certification test**. You will do this on Sakai. Log in to Sakai and search for "Human Subjects" worksite. Join this worksite, and you will be able to complete the training at that Sakai site. To receive your points for this (and to run subjects), you need to bring me (or email me a pdf) documentation that you have completed this training.
4. You will be required to turn in a brief paper (approx. 2 pages) at the end of the semester. Most likely this will entail a reflection on your experiences in the lab, but assignments will be tailored to the interests of each student. This will count towards your weekly time commitment.

COVI Research Projects

I am continuing several ongoing research projects and beginning several new experiments. During the semester, you will have the chance to run participants through experiments, and if you are interested, you can help with thinking about how to design and create experiments.

Effect of uncertainty on perception and memory. This project is in the design phase. When people are asked to recall colors of objects under dim illumination, they are notoriously flawed. (Think about the recent controversy regarding eye-witness testimony). Is this because of initial perceptual uncertainty? Or because memory itself is bad? Or does memory decay faster for uncertain perceptual representations? We are currently finishing design on this project and will begin collecting data shortly.

Color Memory - Real World: We want to see if the results in the JEP:General paper (see Dr. Allred's website) have external validity; that is, we want to see if they generalize to real world objects. We have collected the majority of data on this study.

Color Memory - CRT: We have collected a little data on this project. This color memory project involves displaying stimuli on a computer monitor, and asking about the differences between perception and memory.

Cognitive Load and Perceptual Biases. We are interested in whether taxing (or changing) the cognitive resources available to observers causes perceptual biases in line length estimation. These projects are in collaboration with Dr. Duffy. This project requires programming before data collection will begin.

Memory and Politics. Do your political beliefs influence your ability to remember some types of information? This involves coding data that has already been collected and following up on that data. This is not my main research project and is left from a graduate student you unexpectedly left the program. If you are interested in this, you will need to work pretty independently.

In addition to these research projects, you may learn many other things, including: some basics of color science, how to measure the intensity and chromaticity of light, how to read a research paper, how to present ideas to your labmates.

Grading

Grading in this course is determined as below. The main features that go into the quality of work area are: completing assigned tasks in a timely fashion and always, always dealing responsibly with participants. Any failure to complete responsibilities associated with participants in our research this semester (e.g., not showing up to collect data) will dramatically lower your grade. If you are irresponsible in dealing with participants on more than one occasion you will be asked to drop this course. Grades will be computed as follows, for a total of 210 pts:

Completion of required hours	100 pts
Attendance at lab meetings	40 pts
Final paper	20 pts
Quality of work, conscientiousness, etc.	40 pts
Human subjects certification	10 pts