

## P435 – Spring 2012 - Syllabus

### **Class Time and Place**

2:00P - 5:00P Weds PY230

### **Instructor Information**

Instructor: Professor Chen Yu

Office: PY 346

Office Hours: 4:00-5:30 Tuesday or by appointment

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Home Page: <http://www.indiana.edu/~dll/>

**Course Homepage:** <http://www.indiana.edu/~dll/p435.html>

**Teaching Assistant:** George Kachergis

Office Hours: 10:30-12:00 Wednesday or by appointment, PY A320

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### **Overview**

P435 provides a great opportunity to demonstrate what you have learned in your previous psychology courses. While low-division courses focus on what facts have been learned about human behaviors, P435 involves conducting experiments to learn new facts about the brain and behavior. You will get opportunities to learn how to design and conduct an experiment, how to analyze the data, and how to use state-of-the-art experimental paradigms to collect fine-grained behavioral data.

### **Format of Course**

#### *Reading summary:*

You will be assigned to read research papers through the whole semester. The papers will be posted on the course website <http://www.indiana.edu/~dll/p435.html>. You need to read those papers before each lecture and write up a reading summary at the end of each lecture based on your reading, the lecture, and discussion. The TA will collect your reading summary at the end of the class. Your overall reading score contributes 30% to the final grade.

#### *Lab:*

This is a LAB course. Participation in paper discussion and lab work is the key. It is essential that you learn how to conduct research experiments in a research lab. To do so, you will need to learn and be involved in various aspects of lab work. You will start with being a subject. Then, you will learn to run at least one experiment by yourself as an independent experimenter. Finally, you will take on the role of being a student researcher by designing and running your own experiment. You will work with the TA to finalize a schedule of lab work.

#### *Final project:*

You will team up with your classmates to form a research team. You will pick a topic (with advice from us), design your own experiment to address a novel research question, and collect pilot data at the end of the semester. Your team will present your experimental design in class and write a project report. The project will emphasize thought and creativity as applied to your research question, and represent the culmination of your experiences through the whole semester.

### **Evaluation and Grading**

Grading will be based on a combination of reading summary, lab/class attendance and the final project.

#### **Final Grade:**

Reading summary/assignment/discussion	30%
Lab	30%
Final project	40%

#### **Grading Scale:**

A+:	100.00% - 96.66%
A:	96.65% - 93.33%
A-:	93.32% - 90.00%
B+:	89.99% - 86.66%
B:	86.65% - 83.33%
B-:	83.32% - 80.00%
C+:	79.99% - 76.66%
C:	76.65% - 73.33%
C-:	73.32% - 70.00%
D+:	69.99% - 66.66%
D:	66.65% - 63.33%
D-:	63.32% - 60.00%
F:	59.99% and below

### **How to Succeed in the Course**

- (1) Read the paper before the material is discussed in class. It is important to demonstrate that you have a firm understanding of the experimental design and theoretical contributions of the paper.
- (2) Attend class. This will make it easier for you to understand the papers and keep track of your progress. Also, some of the concepts and some lab related issues will be covered only in class.
- (3) Ask questions in class. If you have a question, it is very likely that others have the same question.
- (4) Work together. You are encouraged to study in small groups and read/discuss assigned papers together. However, this does not mean that you are allowed to copy. You will need to write reading summaries by yourself.
- (5) Lab participation is critical. We will not have a lot of time to run experiments, so be prepared to spend a fair amount of time outside of class preparing and practicing what you will do, and analyzing your results.
- (6) Contact me if you have any problems. Write down which part of the material is particularly unclear to you and leave me a note after class or send it to me by email.

**P457 – Schedule**

Note: Schedule may be subject to change. Any changes will be announced in class and/or via email.

Week	Dates	Topics	Readings assigned	Lab
1	01/11	Introduction	Reading	
2	01/17	auditory learning	Reading	
3	01/24	Speech Segmentation	Reading	Being a subject
4	02/01	visual learning	Reading	
5	02/08	word learning	Reading	Lab observation
6	02/15	Eye tracking and preferential looking	Reading	
7	02/22	Eye tracking data analysis	Reading	
8	02/29	Statistical learning – case studies	Reading	
9	03/07	Discussion of research ideas		Designing your experiment
10	03/21	Student presentation of experimental design (Round 1)		Refining your design
11	03/28	Student presentation of experimental design (Round 2)		Implementing your experimental design
12	04/04	Implementation/Testing		Testing
13	04/11	Implementation/Testing		Running your study
14	04/18	Student presentation of implementation and pilot results		Running your study
15	04/25	Final Presentation		

**Disclaimer**

The syllabus is meant to be provisional, not absolute. Any of the information on this syllabus is subject to change at any time, including reading assignments, grading, etc. Changes will be announced in class and/or on the web page.