

# Psychology 212: Human Experimental

## Term I, 1998

Professor: Chris Wetzel      Office: 115 Clough      Class time: M, F 1:50 - 2:50; W 3- 5  
Office hrs: M,F; 3- 5; TuTH 9:00 - 10:00

### Course Objectives

There are three goals. First, I will expose you to the basic research techniques used in psychology. You will learn the fundamental principles of research design, how psychologists gain knowledge. You will also develop skills and competencies needed to begin a research project. Second, I hope to give you enough practical experience so that you will be ready for upper-level laboratory courses and so that you can make an informed decision about possibly pursuing a research career after you graduate. A final goal is to change your thinking so that you can: 1) critically analyze aspects of your personal life, 2) become an informed citizen who thinks scientifically about social issues, and 3) become an intelligent consumer of research findings presented in the media. This involves applying course materials to improve rational thinking, problem solving, and decision making. In sum, you should finish this course with an appreciation of J.S. Mill's statement, "The logic of science is also that of business and life."

### Course Format

The first half of the course will teach you the basic principles of experimental design. Your text, L. B. Christensen's *Experimental Methodology*, 1997 (**7th** Edition), will be covered at a very rapid pace. It is assumed you have already had an introductory statistics class (math 111 or equivalent) and that you are taking psychology 212 (psychology statistics) along with this course.

There will be 5 tests on this text. In addition, you will have other assignments such as presenting research findings orally in class, criticizing articles, proposing alternative research studies for flawed experiments, etc. Handouts about these assignments, plus information about the course can be found on the academic volume in the "212" folder within the "wetzel" folder. Changes in this syllabus along with other course information may be emailed to you, and it is your responsibility to check your email daily. In order to do well in this course, you must be computer literate and familiar with using the MacLab. Throughout the semester the Computer Center offers free courses on how to use a computer if your skills are weak.

In the second half of the semester, you will design and run an experiment where you manipulate at least one independent variable. This involves submitting a proposal to the faculty research ethics committee, generating experimental materials and procedures, collecting pilot data on your fellow class members, running the final version of the experiment on introductory psychology students, and analyzing the data with your newly developed statistical skills from Psychology 211. You will write up your research project as a journal research article, using "APA" style.

### Assessment and Course Requirements

Many of your homework assignments will mimic the research process in the area of dissonance theory. For these assignments, you will work with a partner, who will critique

your "personal draft" (you will do the same to his/her draft). For grading purposes, you will turn in a revised version of the assignment. For your research experiment, you will pick an "assistant." This person must be different than your partner, but he/she will serve a similar function. In addition, your helper/assistant will be someone to bounce ideas off, and to help you design and execute the experiment.

Your grade will consist of 4 components: your research/experiment write-up (20%), the 5 tests (50%), your contribution as a helper and a collaborator (5%), and your homework assignments (class presentations, essays, critiques, pop quizzes, etc) - 25%. There are about 10 different homework assignments; your homework grade is the average of these assignments, omitting the lowest graded one. The final exam counts as another inclass assignment and will replace any inclass activities/assignments that you miss.

Besides those listed in schedule below, course requirements include:

- 1) **keeping a log of the time you spent on course work, this includes activities with both your assistant and your partner. Record the time spent (nearest half hour) and a few words describing the activity (ie., "looked up references," "entered data," "revised method," etc.) This will be turned in weekly.**
- 2) At the end of the semester, you will grade your own performance and your helper's and partner's performance.
- 3) For all projects, you will turn in your initial, personal draft and a revised version. Only the revised version is graded and entered in the grade book for that assignment. For the research paper, you will turn in an initial draft (revised according to your helper's inputs), which I will initially grade and then return to you for revision. The research paper final grade is based on both the initial, first-draft grade and the final-draft grade, with the latter weighted much more heavily.
- 4) **When you turn in your introduction/literature review revised drafts, you will turn in the PSYCINFO computer literature search output as well as all the photocopied articles you read to create the review. This is the only way I can determine whether you have done a fair and thorough job of reviewing the literature.**
- 5) **When you turn in your results first drafts, you will also turn in your coding sheet and your SYSTAT/SPSS printouts. This is the only way I can tell if you performed the correct analyses.**
- 6) **When you turn in your final version of the paper, turn in all the graded revised drafts, the coding sheet, and the SYSTAT/SPSS printout. This is the only way I can assess how much you improved your paper. You must also turn in all materials (books, journals, etc.) I have loaned you. Failure to follow these instructions may lead to you receiving a grade of incomplete.**
- 7) My judgment of your commitment (grade) as a helper and partner will be based on your partner's grade of you and my sense of how much effort you put in helping them with their initial drafts.

There will also be opportunities to earn extra credit which can move your grade up one letter-step (eg, B- becomes a B; D becomes a D+). The extra-credit assignments will be described as they are assigned.

**It is an honor code violation to consult old tests, papers, or hand-outs before doing assignments. It is also a violation to turn in a paper written for another course.**

## Schedule

#	Day	Date	Reading	Topic	Assignment Due
1	W	8/26	-	<b>Coming up with a good research question</b>	
2	F	8/28	4	Forming hypotheses	Choose partners and topic
3	M	8/31	2	Meet in MACLAB: computer lit searches	Prepare key words
4	W	9/2	1	Descriptive research	Complete psych info search on research topic
5	F	9/4	3		TEST 1: chapters 1,2, 4
<b>Labor Day</b>					
6	W	9/9	Skim 15	The experiment and causation	Annotated bibliography due
7	F	9/11	6	The research report & the research review	Propose own experiment (not graded)
8	M	9/14	5	Research ethics	
9	W	9/16		<b>(In)dependent variables and their cousins</b>	First draft of introduction/lit review due
10	F	9/18	7		Test 2: chapters 3, 5, 6
11	M	9/21		Control techniques and contributing causes	First draft of the method section
12	W	9/23	8	Confounding checks, Rival hypotheses	IRB first draft
13	F	9/25		Randomization, counterbalancing, etc	<b>Revise method</b>
14	M	9/28	9		TEST 3: chapters 7, 8
15	W	9/30		True research designs: Within vs. between	Pilot experiment on class
16	F	10/3	10	Quasi-Experimental Designs	Revise method
17	M	10/5		Types of causation models	Final IRB proposal due
18	W	10/7	<b>11</b>	Single Subject designs	
19	F	10/9			Test 4: chapters 9, 10, 11
20	M	10/12	12	Divergent/Convergent validity	
21	W	10/14		Rival hypothesis game I	Final version of introduction due
22	F	10/16	13	Debriefing, data entry, procedures	
<b>Fall Break</b>					
23	W	10/21		Hypothesis testing with correlations	Final draft of method section due
24	F	10/23	14	The illogic of the null hypothesis	
25	M	10/26		External validity	<b>Begin running subjects</b>
26	W	10/28		Rival hypothesis II	
27	F	10/30		External validity: process versus outcomes	
28	M	11/2		Using theory to generate a prediction	Dissonance theory exercise
29	W	11/4		Design contest I	
30	F	11/6		Aronson + Mills rival hypotheses	
31	M	11/9		Statistical interactions I	
32	W	11/11		Statistical interactions II	
33	F	11/13		Percentage of Variance accounted for	Prepare Dissonance oral presentation
34	M	11/16		Dissonance oral presentations	Begin data entry & set up statistical analysis
35	W	11/18			Test 5: 12, 13, 14
36	F	11/20		Design contest II	Dummy dissonance results section
37	M	11/23		Design contest II	Finish running subjects::
<b>Thanksgiving Holiday</b>					
38	M	11/30		Dissonance data analysis exercise	Analyze own data
39	W	12/2		Dissonance data analysis exercise	
40	F	12/4			First draft of results
41	M	12/7		Dissonance Wars exercise	
42	W	12/9			First draft of discussion
<b>Saturday, December 12, 1:00 pm.</b>					<b>Final Exam plus oral presentation or poster</b>