PSYC 11: LABORATORY IN PSYCHOLOGICAL SCIENCE

Fall 2014; Professor Brad Duchaine
Laboratory Instructors: Sebastian Frank, Rachel Pizzie, Qing Yu
MWF 12:30-1:35pm, X-period: Tuesday 1:00-1:50pm
Lecture room: Moore B03; Labs: Moore 150 (Frank), 302 (Pizzie), & 303 (Yus); Computer lab: Moore 453

COURSE DESCRIPTION AND GOALS

This course is designed to introduce you to the experimental methods of psychological science, ***primarily through hands-on experience*** including lab exercises, discussions, and by conducting actual experiments. You will gain experience with the tools needed to carry out research and learn valuable analytical thinking skills. Much of what you will learn will apply to other fields as well. Lectures will occur only during the first half of the term and will provide an overview of how psychological scientists pursue research questions and give you a foundation for carrying out lab exercises and your own research experiment. Laboratory exercises and workshops will complement the lecture material and give you practical experience in preparation for conducting your own experiment during the 2nd half of the course. Throughout the course you will encounter the critical issues pertaining to conducting research and analyzing data, develop critical thinking skills needed to effectively evaluate research, and consider ethical issues related to psychological research. You will also gain valuable experience in communicating the results of your research in written and oral formats at the end of the course.

PREREQUISITES

a) PSYC 1 or 6, **AND** b) PSYC 10 or Social Sciences 10. I am unlikely to make exceptions to the prerequisites because information in these previous courses is essential to doing well in PSYC 11. Note that PSYC 10 (or Soc Sci 10) must be completed before taking PSYC 11 (i.e., they cannot be taken concurrently). Although you may use other 10-level courses (e.g., ECON 10) to fulfill this prerequisite, PSYC 10 or Soc Sci 10 is preferred because they contain the most relevant background material for PSYC 11.

TEXTBOOK AND OTHER READING MATERIAL

1. Pelham, B.W. and Blanton, H. (2013) Conducting Research in Psychology: Measuring the Weight of Smoke (4th edition). Belmont, CA: Wadsworth.
Please note that the approach of this text is to cover concepts primarily through real-life examples of research. When teaching concepts in class, I may refer to the examples covered in the text and assume you have a reasonable level of familiarity with them. Thus it is critical that readings be completed before each class.

2. There will be other assigned readings throughout the term that will complement the material in our textbook. These readings will be available on the PSYC 11 Canvas webpage.

ROUTES OF LEARNING AND EVALUATION

There will be several different mechanisms, or "routes," through which you will develop your methodological expertise. Each of these routes will also provide part of the basis for your grade in the course.

1. Lectures and midterm exam (30% of final grade). During the first half of the course will include lectures and readings to provide you with a foundation in methodology and research issues in preparation for conducting your own research study in the second half of the course. The lectures will be complemented by chapters of the Pelham & Blanton text and other assigned readings. At the end of the lecture portion of the course, we'll have a midterm exam on the lectures and readings.

2. Experiment idea worksheets (5% of final grade). You'll read a brief review article or empirical article (Eyewitness identification; Wheatley (2005); Friesen (1998)) and then complete a worksheet in which you describe a research question related to the topic reviewed in the article and an experiment aimed at addressing that research question. Email your worksheet to your TA prior on the due date. In class, you'll break into groups

to discuss your ideas and then each group will describe a couple of experiments to the whole class. (These worksheets, like all your projects, will be graded on a 100-point scale, and there will be a **20 point penalty for each day (or part of a day) that it is late**.)

3. Laboratory exercises (20% of final grade). The labs are intended to provide you with hands-on experience and prepare you to conduct and write-up your own final project and paper. Therefore, **attendance is MANDATORY and everyone is expected to actively participate in each of the labs.** The exercises you will carry out in the labs will vary from week to week. Examples include learning how to find resources for your project, and carrying out brief experiments to hone your statistical skills and provide you with practice in writing up Method and Results sections. You will also have an opportunity to receive feedback from your Lab Instructor on your project. You are encouraged to keep a lab journal in which you should document your ideas, questions, and other thoughts about the lab exercises. The lab grade will be based on the two method/results write-ups (6% + 6%), a statistical analysis (5%), and participation (3%). The method/results write-ups and the statistical analysis should be done on your own. Please note that it is **not** possible to make up a lab session if it is missed. Lab reports should be emailed to your lab instructor by the start of class on the day specified on the Course Schedule; there will be a **20 point penalty each day (or part of a day) an assignment is late**.

5. Final research project and paper (30% of final grade). Carrying out experiments and preparing manuscripts to disseminate the results are core components of psychological research. During the term, you will team up with three other students in your lab group and choose your own, novel research project to carry out. The group will design the experiment and collect the data in consultation with the Lab Instructor. Much of the second half of the term will be dedicated to data collection, analysis, and preparation of a final paper and poster presentation. **You must email your paper to your Lab Instructor before the beginning of the final class** (**20 point penalty for each day or part of a day that it is late**)**.** It will describe the project your group carried out. The Method and Results section of the paper can be prepared by your group as a whole, but the rest of the paper must be your own work (i.e., Abstract, Introduction, Discussion, References). This manuscript must be prepared in *American Psychological Association* publication style and the length of the main sections (Abstract, Introduction, Methods, Results, and Discussion) must be from 10 to 15 pages. The paper also needs a Reference section and should include at least one figure and table (more is usually better).

6. Poster presentation (10% of final grade). Each group will create and present a poster describing their research project. You will present your poster by walking your lab instructors through your research project. Each member of the team will have to present the poster and will be graded on this presentation. You will also present your poster in the Filene Foyer to your classmates and faculty and students in PBS. This exercise will provide real-life experience in presenting your research since poster presentation sessions are commonly used at psychology meetings. Awards will be given out for best presentation(s).

7. Effort for final project (5% of final grade). In most cases, people in each group do their part to make the experiment successful, but occasionally a few students have not done their fair share. At the end of the term, students will rate the members of their team on their effort and provide brief comments about the effort of each group member. A percentage score for the other members will be provided (e.g., if there are three members in a group, 33% would indicate another student is doing their fair share; 20% would indicate a lack of effort; 50% would indicate doing more than their fair share). We'll average scores for each person in a group and use that number to compute a final value. That final value will not be more than 100% of the 5% of the overall points.

RANGES FOR FINAL GRADES: A = 93-100; A- = 90-92.9; B+ = 87-89.9; B = 83-86.9; B- = 80-82.9, etc.

POLICIES

Honor Code: Students in PSYC 11 are expected to strictly adhere to the Dartmouth Academic Honor Principle. As described in the Student Handbook, fundamental to the principle of independent learning is the requirement

of honesty and integrity in the performance of academic assignments, both in the classroom and outside. Dartmouth operates on the principle of academic honor. Students who submit work that is not their own or who commit other acts of academic dishonesty will forfeit the opportunity to continue at Dartmouth. If you have any questions or concerns regarding this policy during the course, please contact Professor Duchaine.

Missed exam or assignment: A student will only be excused from the mid-term exam or an assignment by permission of the Instructor and on the basis of a written note from a dean, doctor, or supervisor of official college-sponsored events being held off-campus and requiring a students' absence. If excused, a make-up must be taken as soon as possible (usually within 1 day of the originally-scheduled exam/assignment date).

Students with disabilities: Students with disabilities are encouraged to arrange for accommodations that might be helpful to them. Please meet with Professor Duchaine as soon as possible (preferably during the first week of the class) to discuss possible accommodations. All discussions will be held in confidence, although the Academic Skills Center may be consulted to verify documentation of the disability.

Religious Observance: you have a religious observance that conflicts with your participation in the course, please meet with Professor Duchaine before the end of the second week of the term to discuss appropriate accommodations.

Course Schedule

Date	Topic	Readings for class	Assignments due
Week 1			
Sept 15 (M)	NO CLASS		
Sept 17 (W)	Lecture 1: Introduction/Overview		
Sept 19 (F)	Lab 1: a)generating research ideas b) how to read research articles	ZZS Chap 10 (Canv) P&B Ch 1	
Week 2			
Sept 22 (M)	Lecture 2: Research aims & idea generation	P&B Ch 2 Eyewitness paper	Eyewitness worksheet
Sept 23 (T)	Workshop: Writing your methods and results sections (in B03)	P&B Ch 11 (336-56)	
Sept 24 (W)	Lab 2: Serial Position Effect	P&B Ch 3 & 4	
Sept 26 (F)	Lecture 3: Experimental Design	Wheatley (2005)	Wheatley worksheet
Week 3			
Sept 29 (M)	Lab Workshop: Stats & SPSS tutorial (453 Moore)	P&B Ch 10	Serial Position: Method & Results
Oct 1 (W)	Lab 3: Blind Taste Test	Friesen (1998) P&B Ch 5	Friesen worksheet Initial ideas for project
Oct 3 (F)	Lecture: Ethics in research (MANDATORY!)	Ethics readings (Canvas)	
Week 4			
Oct 6 (M)	Lab 4: Stroop experiment	Stroop readings (Canv) P&B Ch 7	Taste Test SPSS analysis
Oct 8 (W)	Lab 5: Plan for data collection	P&B Ch 8	Decision on project topic
Oct 10 (F)	Lecture 4: Research mechanics	P&B Ch 6	Stroop: Method & Results
Week 5			
Oct 13 (M)	"Lecture" 5: Review	P&B Ch 9	Project proposals
Oct 15 (W)	**Midterm exam**		
Oct 17 (F)	Data collection		
Week 6			
Oct 20 (M)	Data collection		
Oct 22 (W)	Data collection		

Oct 24 (F)	Data collection	
Week 7		
Oct 27 (M)	Data collection	
Oct 28 (T-X Hour)	Data collection	
Oct 29 (W)	Data collection	
Oct 31 (F)	Lab Workshop: APA style and Writing the Intro & Discussion	
Week 8		
Nov 3 (M)	Workshop: How to make a successful poster	
Nov 4 (T-X Hour)	Data collection	
Nov 5 (W)	Data collection	
Nov 7 (F)	Data collection	Outline of your Intro (if you want feedback from your TA)
Week 9		
Nov 10 (M)	Lab 6: Review of draft poster with lab instructor	Complete poster draft
Nov 12 (W)	Lab 7: Individual poster presentations to lab	Final poster
Nov 14 (F)	Public poster presentations (**Moore Basement 3:00-4:30**)	
Week 10		
Nov 17 (M)	Course debrief and wrap up	Final paper

Course Personnel

Professor
Brad Duchaine
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Laboratory Instructors
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