Psychology 314L (52510): Research Methods Spring 2013

Lecture Location: Seeley G. Mudd Building, Room 226 Days and Time: Tuesday & Thursday; 11:00 a.m. to 12:20 p.m.

> ALL Labs Location: King Hall, Room 208 Tuesday Lab Time: 8:00 a.m. to 9:50 a.m. Friday Lab Time: 12:00 p.m. to 1:50 p.m.

> Online portion at http://blackboard.usc.edu

Instructor Information

Dr. Clayton L. Stephenson Non-Tenure Track Professor <u>clstephe@usc.edu</u> Office Location: SGM, Room 526 Office Hours: Monday, & Wednesday 1:00 p.m. – 3:00 p.m.; Friday 10:00 a.m. – 1:00 p.m.; and by appointment

TA Information

Devika Dhamija; ddhamija@usc.edu

Syllabus

Course Description

Psychology is a science. Science requires specific methods that tests, confirms, or disconfirms hypotheses that lend supporting evidence or no evidence to a theory. Therefore, the course you are about to take is one of the most important courses you will take in psychology. Without rigorous, systematic research methods, much of theoretical and practical knowledge we have about perception, cognition, attitudes, learning, human development, stereotypes, and many other areas in psychology would not exist. Although this course is not content specific, the knowledge and content of the course can be applied to any content specific course in psychology and neuroscience. You will learn about the philosophy of science, the various types of methods psychologists use, learn how to and actually conduct an experiment, and write a paper adhering to the Publication Manual of the American Psychological Association.

Prerequisites

PSYC 100 (Introduction to Psychology) PSYC 274 (Statistics I)

Teaching Objectives

- Provide students with the fundamental knowledge of research methods and design used in psychology.
- Facilitate students understanding for how using valid scientific methods can improve and create knowledge in the field of psychology.
- Guide and mentor students in developing, completing, writing, and presenting a valid and ethical psychology experiment.

Student Learning Objectives

After successfully completing this course, students will be able to . . .

- identify areas in psychology in which they have strong interests.
- describe and discuss the concepts in various psychological research methods and design.
- critically analyze scientific claims made in popular and academic media.
- analyze and interpret quantitative data.
- collaborate and complete psychological research projects with their peers.
- verbally present their research findings in a coherent and concise manner.

Required Texts

McBride, D. M. (2013). *The process of research in psychology* (2nd ed.). Thousand Oaks, CA: Sage Publications.

American Psychological Association. (2010). *Publication manual of the American psychological association* (6th ed.). Washington, DC: American Psychological Association.

Supplemental Readings. (Various dates). Posted on Blackboard.

NOTE: Texts are available at the bookstore or online.

Assessment	Due Date or Exam Date	Percent of Final Grade
First Exam	February 7 th	5 (individual grade)
Midterm Exam	March 7 th	10 (individual grade)
Research Proposal	March 15 th	10 (individual grade)
Survey Report	March 29 th	5 (individual grade)
Second Exam	May 2 nd	10 (individual grade)
Final Research Paper	May 10 th	20 (individual grade)
Research Project Presentation	May 14 th	15 (individual grade)
Lab Assignments	Continuous	15 (individual or group)
Participation = Lecture (5%) +	Continuous	10 (individual and group)
Lab (5%)		

Examinations

Two exams and a midterm examination will be given. The examinations will test your understanding of the major concepts in the course, and will focus on both the details and "the big picture." The examinations are based on a combination of lecture material, class discussions, textbook, student oral presentations, video-presentations, assignments, and handouts. The examinations will consist of multiple-choice questions, matching, word problems, and short essays. *Each exam is cumulative; thus, whatever was tested on the first exam, will be tested on the Midterm Exam and material on those two exams will be*

on the second exam. If you show up 15 minutes or later on a bonus prep or examination day, then you will **NOT** be allowed to take the bonus prep or examination with the exception of **verifiable** emergencies.

Research Proposal & Final Research Paper

You will write a research proposal in the first half of the semester and collect data in accordance to your proposal during the second half of the semester. The research proposal is an important process in providing a clear statement of the problem, a review of literature, how the literature relates to your study, formal research questions and hypotheses, a full methods section, and the data analysis you intend to conduct. The final research paper will be the result of your semester's lab work and a demonstration of your ability to apply your knowledge so that you have a real experimental study to report. You will work in groups of three or four to in completing the project, but you will write the proposal and final paper individually. *Please Note: These two papers are 30% of your grade, so be diligent in writing your paper and getting help from your TA immediately if you have any problems.*

Research Project Presentation

In place of a final exam, you will present your research study with your group. Presentations are presented in a conference format and should be professional. You may be as creative as you want to be in presenting your study and PowerPoint is *NOT* required. *Please Note: The presentation is 15% of your grade, so you will be held to high expectation and standards.*

Survey Report

You will write a shorter research paper (approximately 6-8 pages) on the survey data that we will collect and analyze together as a class. We will complete the majority of work in the class and in labs.

Weekly Lab Assignments

The lab assignments are designed for you to acquire the necessary skills, knowledge, and tools to complete your research proposal and final research paper. Labs are also designed for you to acquire, at the minimum, a working knowledge of the different types of methods psychologists use such as observations, surveys, correlational studies, and experimental studies. You will also learn or relearn statistical software, how to read output, and how to use APA format in your papers.

Participation Points (Class & Lab)

Reading the assigned material and completing the assignments before class and lab are important to understanding the lecture topics and to participating in the discussions. Various *participation point questions* will be asked during class for which a response is expected, on paper, and discussions will be based on those questions. Exercises may occasionally be assigned in class in order to help you to understand the course material. These exercises may be worked on in class, or may be due at a later date. Lab participation will be graded based on the completion of a specific assignment or demonstration that will take place each lab.

Grading Scheme

 $\begin{array}{l} A = 100 - 93.5\%; \ A - = 93.4 - 89.5\%; \ B + = 89.4 - 86.5\%; \ B = 86.4 - 83.5\%; \ B - = 83.4 - 79.5\%; \ C + = 79.4 - 76.5\%; \ C = 76.4 - 73.5\%; \ C - = 73.4 - 69.5\%; \ D + = 69.4 - 66.5\%; \ D = 66.4 - 63.5\%; \ D - = 63.4 - 59.5\%; \ Below \ 59.5\% = F \end{array}$

Statistics Background

All students in this class are required to have achieved a C- grade or better in their Statistics I course. Students should have an introductory level of familiarity with descriptive and inferential statistics, their interpretation, and writing of statistical results. The Research Methods course builds heavily upon your background in statistics; students *without* an adequate background in statistics may find this course difficult. We will thoroughly review common statistical methods. You should be able to identify the appropriate statistics for each design type, depending on the scale of measurement used by the researchers. You will be expected to be able to input data into SPSS, run the appropriate statistics, read SPSS output, be able to infer the number of participants in the sample and levels of an independent variable from degrees of freedom. All of these skills will be taught or reviewed in lecture and labs.

Course and University Policies

- <u>Missed Exams and/or Assignments</u>: Missed examinations and assignments cannot be made up and will result in a grade of zero. Students who experience medical emergencies that prevent them from attending class on days when class exercises, bonus preps, or examinations are scheduled will be required to provide original documentation from their physicians within one week explaining their absence. USC athletes should meet with me by the end of the second week regarding their scheduled athletic events that may conflict with course requirements.
- 2) <u>Feedback</u>: The instructor and TA will make every attempt to return exams and assignments in a reasonable time by returning them no later than two weeks after the due date.
- 3) <u>Appeal Process</u>: If you find that an answer in your homework assignment, bonus prep, or exam was incorrect, but you think it is correct, you can appeal the decision in writing. The written appeal must have supporting documentation (e.g., reference to a class reading). The appeal cannot be based on your opinion or personal experience, but rather based on the course materials. Appeals must be delivered to the instructor no later than one week after the grade is posted. Appeals will not be accepted via email and no late appeals will be accepted.
- 4) <u>Tardy Policy</u>: Do NOT show up late to class or lab. Period.
- 5) <u>Cell Phone and Electronic Device Policy</u>: Cell phones should be turned off during class. Do NOT leave cell phones on vibrate and do NOT text message during class. Computers may be used for note taking purposes only. Any other usage (e.g., accessing Facebook, email, or gaming) in class is not permitted and will result in disciplinary action.
- 6) <u>Course Participation</u>: You are expected to be prepared for class by completing the required readings or exercises BEFORE class, and should be prepared for discussion of the assignments (and participation point questions).
- 7) <u>Academic Dishonesty</u>: Plagiarism, lazy writing, and cheating are violations of the Student Judicial Affairs & Community Standards and may be dealt with by both the instructor and the university. Plagiarism is defined as, "the act of presenting the ideas and writings of another as one's own." Lazy writing is defined as, "using quotes or paragraphs with the proper citation, but are used in a manner that a paper is stitched together and clearly has little or no original writing." Cheating is defined as, "the act of obtaining or attempting to obtain credit for academic work through the use of any dishonest, deceptive, or fraudulent means." In instances of academic dishonesty, the instructor will take appropriate action as outlined in the Academic Integrity Review Process (SJACS 14.10). For more information on avoiding plagiarism or lazy writing, see Chapter 16 in Borden and Abbot (2010), Chapter 1 in the APA Publication Manual, or visit http://www.usc.edu/student-affairs/student- conduct/ug_plag.htm.

- 8) <u>Support for Student with Disabilities</u>: If you are in need of an accommodation for a disability in order to participate in this class, please see the instructor and contact Disabilities Services and Program at (213) 740-0776.
- 9) <u>University Escort Service</u>: If you feel that you would like to be escorted to your vehicle, bus, or campus residence after 5:00 p.m., do not hesitate to call (213) 740-4911.

Instructor Student Communication and Blackboard

Blackboard (Bb) will be used to post announcements, send e-mails, and post all grades and course materials, so it is the student's responsibility to frequently visit the course on Blackboard (website: <u>http://blackboard.usc.edu</u>). Bb transactions will follow the below guidelines.

- 1) <u>Grades</u>: All grades and points will be posted on Bb one to two weeks after the completion of the exam, assignment, or activity. Grades will not be announced in class, via e-mail, or during office hours.
- 2) <u>Course Materials</u>: The syllabus, homework assignments, and supplemental reading material can be viewed and printed from Bb.
- 3) <u>Announcements</u>: Class announcements will be posted on Bb, as well as broadcasted in class.
- 4) <u>Email</u>: Any email communications from the instructor or TA will be sent via Bb or through the USC's email service. USC requires that all e-mail communication between the instructor and students be sent via an official USC e-mail address. *Any student communication delivered from a non-USC e-mail address will be automatically discarded*. Lastly, please see "How to e-mail a professor" on Bb for guidelines on how to write an appropriate e-mail to a professor.

Special Notes

- 1) This course is challenging and 100% attendance is expected of all students. It is clear that students who attend class regularly, stay up with the readings, complete the assignment with full effort, and who do not leave studying until the las moment typically find that they enjoy the course more and achieve at least a C or better in this course. As in any course, work of a significantly high caliber in each of the components of this course is considered to be a B (i.e., good) or an A (i.e., exceptional) work. It is especially important that you be on time for class, have completed your reading assignments prior to class-time, and that you are prepared for discussion of these materials in class.
- 2) All assignments in this course are expected to be word-processed and graphs/tables should be computer-generated.
- 3) <u>All assignments should be completed using APA-style, including the use of a title page.</u> Assignments are due at the beginning of class or lab or on a predetermined due date and should be submitted electronically through Bb. Word processing and data management software are available in several computer labs on campus. You should consult your APA Publication Manual for all writing assignments.
- 4) All students are expected to have access to the student computer network. It is your responsibility to ensure that your access is up-to-date during the semester.
- 5) Tutors are available for this course through the Learning Resource Center (LRC). If you should find that you are not doing as well in this course as you would like, please see me immediately. I will help you as best I can. You can also arrange short-term or long-term tutoring through the LRC. The Writing Center is also available to tutor students who are having difficulty with writing. For assistance, visit their website at <u>http://college.usc.edu/writingcenter/</u> or call (213) 740-3691.

Week & Reading		Date and Topics	
Week 1	01/15/2013	01/17/2013	NO LAB
Syllabus	Overview of	Science	
Chapter 1	course	Philosophy of	
		science	
Week 2	01/22/2013	01/24/2013	LAB #1
Journal	Reading a	Reading a	Skills & tidbits for
Articles	journal article	journal article	Microsoft Word
			> APA format
			SPSS
Week 3	01/29/2013	01/31/2013	LAB #2
Chapter 2	Understanding	Data collection	Searching for
Chanter 3	theories	techniques	articles
onapter 5	Developing		Critiquing and
	hypotheses		summarizing
			articles
Week 4	02/05/2013	02/07/2013	LAB #3
Chapter 4	Preview of	➢ Exam # 1	 Search for articles
	designs		 Formatting
	Scales of		reference section
Wook 5		00/14/0012	
Chapter F	$V_2/12/2013$	$\frac{02}{14}$ Ethical	LAD #4
Chapter 5	reliability	guidelines	 NIH certification
Week 6	02/19/2013	02/21/2013	LAB #5
Chapter 9	\rightarrow Types of	 Creating 	Create new survey
	survey	surveys	questions
	questions		 Distribute survey
Week 7	02/26/2013	02/28/2013	LAB #6
Chapter 6	Sampling	Experiments	Design research
Chapter 11			study
Week 8	03/05/2013	03/07/2013	LAB #7
Chapter 11	Experiments	Midterm Exam	Design research
			study
			> Write proposal
Week 9	03/12/2013	03/14/2013	LAB #8
Chapter 12	Quasi-	Reporting	Complete proposal
Chapter 8	experiments	research	 Analyze survey data
		r Keseurch	uala
		on March 15th	
		at 11:59 p.m.	

Tentative Schedule of Topics and Assignments

Week 10	03/19/2013	03/21/2013	NO LAB
No Reading	SPRING BREAK!		SPRING BREAK!
	NO CLASS!		NO LAB!
Week 11	03/26/2013	03/28/2013	LAB #9
Chapter 7	How to report	How to report	Analyze survey
	descriptive	inferential	data
	statistics	statistics	Create materials
	How to display	Survey report	for experimental
	tables and	due March 29 th	research study
	figures	at 11:59 p.m.	
Week 12	04/02/2013	04/04/2013	LAB #10
Chapter 10	Correlational	Developmental	Complete creating
Chapter 13	research	designs	materials
			Collect data
Week 13	04/09/2013	04/11/2013	LAB #11
Creswell	Specialized	Observational	Collect data
(2009)	designs	research	 Analyze data
Week 14	04/16/2013	04/18/2013	LAB #12
Creswell	 Observational 	Conducting	Collect data
(2009)	research	interviews	Analyze data
	(cont.)	(cont.)	Work on results
	Conducting		and discussion
	interviews		sections
Week 15	04/23/2013	04/25/2013	LAB #13
Creswell	Qualitative	Mixed designs	Collect data
(2009)	analyses		Analyze data
			Write final paper
Week 16	04/30/2013	05/02/2013	LAB#14
No Reading	Observation	➢ Exam #2	Analyze data
	results		Complete final
			paper
			Final Research
			Paper due May
			10 th at 11:59 p.m.
Week 17	05/14/2013		
	Presentations: 11:00 a.m. to 1:00 p.m.		

Syllabus as a Contract

The purpose of this syllabus is to provide a contract between the instructor and the student. By enrolling in this class, you agree that you have read, understand, and will adhere to the syllabus guidelines and complete the assignments given in the class. I reserve the right to change the schedule of topics and readings and I will give notice to you of such changes well in advance of those changes.

A statistics professor was describing sampling theory to his class, explaining how a sample can be studied and used to generalize to a population. One of the students in the back of the room kept shaking his head. "What's the matter?" asked the professor. "I don't believe it," said the student, "why not study the whole population in the first place?" The professor continued explaining the ideas of random and representative samples. The student still shook his head. The professor launched into the mechanics of proportional stratified samples, randomized cluster sampling, the standard error of the mean, and the central limit theorem. The student remained unconvinced saying, "Too much theory, too risky, I couldn't trust just a few numbers in place of ALL of them." Attempting a more practical example, the professor then explained the scientific rigor and meticulous sample selection of the Nielsen television ratings which are used to determine how multiple millions of advertising dollars are spent. The student remained unimpressed saying, "You mean that just a sample of a few thousand can tell us exactly what over 250 MILLION people are doing?" Finally, the professor, somewhat disgruntled with the skepticism, replied, "Well, the next time you go to the campus clinic and they want to do a blood test...tell them that's not good enough ...tell them to TAKE IT ALL!!"

A ONE-WAY ANOVA shouted at a TWO-WAY ANOVA: "STOP! Turn around - You are going the wrong way!" The TWO-WAY ANOVA yelled back: "Sorry! I will turn when I see an interaction!"

Can you read the following paragraph?

Cdnuolt blveiee taht I cluod aulaclty uesdnatnrd waht I was rdanieg. The phaonmneal pweor of the hmuan mnid, aoccdrnig to a rscheearch at Cmabrigde Uinervtisy. It dn'seot mttaer in waht oredr the ltteers in a wrod are, the olny iprmoatnt tihng is taht the frist and lsat ltteer be in the rghit pclae. The rset can be a taotl mses and you can sitll raed it wouthit a porbelm.

You should be able to read the previous paragraph quickly and understand it. What if it's statistical literature as provided in the next sentence. Do you know what it says?

Miittluvraae asilyans sattes an idtenossiy ctuoonr epilsle is the itternoiecsno of a panle pleralal to the xl-yapne and the sruacfe of a biiiarave nmarol dbttiisruein.

