

PSY 301: Introduction to Research Methods in Psychology
San Diego State University
Fall 2008

INSTRUCTOR: Allison A. Vaughn, Ph.D

EMAIL: avaughn@sciences.sdsu.edu

LECTURE: Tuesday/Thursday 9:30am-10:45am, LS-111

OFFICE HOURS: Tuesday 11am-12pm, LS-175 (or by appointment)

PHONE: 619.594.5536

LAB: Wednesday 8:00am-9:50am, LS-027/029E

LAB TA: Stephanie Stocking (stocking301@gmail.com)

WEBSITES:

Blackboard: <http://its.sdsu.edu/blackboard/>

Lab: www.sci.sdsu.edu/classes/psy301/Vaughn_Stephanie

*“In science the credit goes to the man who convinces the world,
not the man to whom the idea first occurs.”*

~Sir Francis Darwin~

COURSE OVERVIEW: This course is designed to review methodology issues that pertain to social psychology, including ethics, cultural sensitivity, measurement validity and reliability, experimental and quasi-experimental methods.

LEARNING OUTCOMES:

Psy 301 Goals: By the end of this class you will know how to:

1. **Use scientific method to answer questions about human behavior**, specifically
 - **Measurement** issues, learning
 - to differentiate between constructs and observable behaviors
 - to develop operational definitions and observational strategies
 - to write good survey questions, and
 - to develop measures that are both reliable and valid
 - **Design** issues, learning
 - to state hypotheses that can be tested
 - to design or plan modest studies using correlational, experimental and quasi-experimental (real world) designs
 - to develop good strategies for sampling and assignment to treatments
2. **Make sense of data that you have collected or read in the news.**
 - **Interpretation of results**, learning
 - to interpret statistical results including significance, effect size, margin of error and confidence intervals
 - **Evaluation of designs**, learning
 - to state the type of conclusion, causal or otherwise

3. Write scientific reports.

- **Accuracy**, learning
 - to follow directions to the letter and
 - to describe procedures and results in perfectly accurate detail
 - to submit reports that have been checked for spelling and sense
- **APA style**, learning to follow specific rules for scientific writing
- **Effectiveness**, learning to make clear and persuasive statements.

REQUIRED TEXT/ITEMS:

- *Behavioral Research Methods*, 5th Ed., Mark R. Leary, Brooks/Cole.
- *Project Manual Fall 2008*, Sandra Mollenaer
- Flash drive

CLASSROOM POLICIES:

- **Attendance:** We will be doing activities every class session, so attendance is crucial.
- **Respect:** While in class, please show respect not only to the instructor but also to the other students—no cell phones, pagers or two-way walkie-talkies. No texting, instant messaging, or ipods. Also, please be sensitive to the opinions of others by refraining from side conversations, interruptions, sleeping, etc. You will be asked to leave the classroom if you fail to show such respect.
- **Students with disabilities:** ADA/Accommodations: San Diego State University seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Student Disability Services (SDS), 619.594.6473 or online at <http://www.sa.sdsu.edu/sds>. SDS will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in alternative format with prior notification to the SDS.
- **Academic dishonesty:** The Student Code of Conduct is online at <http://www.sa.sdsu.edu/srr/conduct1.html>. The academic dishonesty code specifies actions for behaviors such as cheating on tests, plagiarism, and/or inappropriately collaborating with others. I will enforce the code in the course; cheating or other violations will result in appropriate penalties, including a failing grade on the assignment or in the course, and the reporting of that incident to the Office of Student Rights and Responsibilities. Students have the right to appeal such action in accord with the due process.
- **Exams:** If you know that you will miss an exam, please *make arrangements with the instructor at least 1 week prior to the exam*. If you miss an exam without making prior arrangements, you will need appropriate documentation to take the exam. Make-up exams will be scheduled on a case-by-case basis.
- **Quizzes:** You will **not** be able to make up quizzes, but you will be able to drop your lowest quiz. If you happen to miss a quiz for any reason, that will be the one you drop.
- **Grade challenges:** Upon receiving graded assignments, you have **1 week** to check your grade with the instructor. This includes the grade for the final exam and your final grade for the class. After one week, grade challenges will not be reviewed.
- **Survey project:** We will work together as a class to construct a survey on some topic that interests us all. Then you will work individually, collecting your own data, analyzing it and writing reports. Instead of working on one enormous report at the end, you will be

doing the project in small manageable sections throughout the semester, and then putting it together at the end. We have allotted a great deal of class time for the project reports, and the TAs and I will be giving you lots of help along the way.

- **Oral report:** Toward the end of the semester you will be doing a short (very short) report on a news article that reports some hot new research finding. Actually, you will be working in pairs so that your own oral report will be very, very, very short. We will give you the article together with some hints about how to critique it. Then you and your partner will describe the research and do a brilliant analysis based on what you have learned in PSY 301.

*****You must do the Oral Report to receive a grade in PSY 301!*****

LABORATORY:

- You will be doing things a little differently than you did in Psy 271. **A lab report is due at the end of each lab, and we have to insist that you do these reports in the lab.** However, Psy 301 is an important course in the major, and so we need to know that people are doing the report and not just copying it from someone else. I'm sure you would be very irritated to learn that while you did all of your lab work conscientiously someone else just copied it from a friend.
- **Lab Assignments:** For each lab, you have an assignment to complete *before* lab. The TA's will be checking these assignments at the beginning of lab. **To receive full points on the lab you must have done the assignment before lab.**
- **Lab Rules:**
 - **You must attend YOUR lab section**, i.e. section in which you are officially enrolled.
 - **Never insert your flash drive before you have mailed in your assignment.** We will remind you about these rules, but be forewarned: **if you insert a flash drive before mailing in your assignment, you will receive a zero for that lab.**
 - **Send in a report before you leave lab, and if necessary send in the rest later.**
 - **If you miss lab or leave without doing the lab during the lab period, the lab report is still due but is worth only half the points.**
 - **Revising labs.** We are going to let you revise the Lab 1 Report after you receive feedback, and you will have **the option to revise one additional report** for additional (**not the full number** of possible) **points**. You will also have the option, requirement actually, to revise some of the sections of the project.

GRADES:

In determining your grade we have two major concerns:

- You must show that you understand and can apply concepts, as shown in your **performance on exams**.
- You must demonstrate that you can work consistently and independently to produce quality work, as shown by your **performance on labs, the project, and quizzes**.

We consider both of these components to be very important. Therefore, **your grade will be determined by your average on BOTH components of the class**. Specifically, for

Grade of A: must average **A on the Exams AND** at least **B on the other components.**

Grade of B: must average at least a **B on the Exams AND** at least **B on the other components.**

Grade of C: must average at least a **C on the Exams AND** at least a **C on the other components.**

Grade of D: must average at least a **D on the Exams AND** at least a **D on the other components.**

You must complete the project to pass the class.

We will use standard grading criteria, 92 % A, 90 % A-, 88 % B+, 82 % B, 80 % B-, 78 % C+, 72 % C, 70 % C-, 68 % D+, 62 % D, 60 % D-.

You must do the Oral Report to receive a grade in PSY 301.

This means that you *cannot* earn an A by averaging a B on exams and earning all possible lab points. Conversely you cannot earn an A by earning an A on all the exams, but blowing off the lab/project components. You must do well on BOTH.

On the positive side, this means that if you get off to a bad start, you can make it up by doing a splendid job on the cumulative final and the project.

If you fall half way between two grades, we will base the decision on final total points and on factors such as **improvement across the term.**

		Points Each	Points Total
EXAMS	2 Midterms	100	200
	FINAL (comprehensive)	150	150
			350
Quizzes	10 (drop one)	10	90
Laboratory	6 Lab Reports	12	72
Oral Report	report & attend/discuss	15	15
Project reports	Survey Project Reports*		100
	Final Report	6	6
			283
Total			633

Point Breakdown for Project:

- 30 Survey Project Introduction
 - 10 Literature Search and Hypothesis
 - 15 Literature Review and Rationale
 - 5 Introduction with revisions, Title Page and Reference page
- 15 Method
- 15 General Results
- 15 Results of Hypothesis tests
- 15 Discussion
- 10 Abstract
- 6 Final Report

Class Schedule

Date	Topic	Reading Assignment
Week 1 Tuesday 9/2	Why science? <i>Class survey</i> Why Method sections are important <ul style="list-style-type: none"> • Prep for Lab 1: Method Alcohol Survey <i>Groups:</i> Asking questions scientifically	Chapter 1
Lab 1	BRING Flash drive Lab 1 report: Method, Alcohol Survey	Rep: 12 pts
Thursday 9/4	Course Overview: the Alcohol Survey and the Class Project <ul style="list-style-type: none"> • Prep for Lab 2 & the open article quiz: Using literature for an Introduction <i>Groups:</i> Asking questions scientifically	Bring Lab Manual Quiz 1: 10 pts <i>Qz: Lct, Ch 1, & syl</i>
Week 2 Tuesday 9/9	Open article quiz <ul style="list-style-type: none"> • More help Lab 2, Stating a hypothesis Review: distributions, <i>SD</i> , & normal curve <i>Groups:</i> procedure medical marijuana/operational definition	Quiz 2: 10 pts <i>Qz: Alcohol Article</i> Ch 5 p. 126 - 138 (not formula p. 136)
Lab 2	Lab 2 report: Introduction Alcohol survey	Rep: 12 pts
Thursday 9/11	Studying Human Behavior: Variability, variability, variability “Error” vs. systematic variance <i>Groups:</i> Rating Attractiveness: explaining variability	Chapter 2
Week 3 Tuesday 9/16	Survey Project Big Picture: Reporting survey results <ul style="list-style-type: none"> • Prep for Lab 3: Participants and reporting survey results Measurement: Reliability - True score, observed score and measurement error <i>Activity:</i> Measuring Pulse rate: true score vs. observed score	Manual p 32 Ch 3, up to Est Validity, p 67
Lab 3	Bring Corrected Lab Report 1 Lab 3 rep: Method & Survey Response Results, Alcohol Survey	Rep: 12 pts
Thursday 9/18	Margin of Error in Alcohol survey data <ul style="list-style-type: none"> • Prep for Lab 4: Margin of Error Variability in true score & measurement Error <i>Groups:</i> Survey Project Topics	Quiz 3: 10 pts <i>Qz: Lct, Ch 2, Pp3</i> Ch 5, Pp. 116 up to strat samp, p. 119
Week 4 Tuesday 9/23	Validity <i>Finalize Survey Topic</i> “Measuring” intimacy: reliability and validity Observation strategies <i>Groups:</i> Love lab and measurement & observation	Ch. 3 p.67 to end Before class: Ch 4, Pp.79 –101
Lab 4	Lab 4 rep: Margin of Error, Alcohol survey data	Rep: 12 pts
Thurs 9/25	Writing good survey questions <ul style="list-style-type: none"> • Prep for Lab 5: doing questions • QUESTIONS DUE AT BEGINNING OF Lab 5 	Quiz 4: 10 pts <i>Qz: Lect, Txt since Q3</i>

	<i>Groups</i> : Reliability & Validity in measure of Anger Management Review and prep for exam	
Week 5 Tuesday 9/30	MIDTERM I Object & Essay Scantron Form F-288 (Red) Ch 1, 2, 3, 4 Pp. 79 - 101, Ch 5 Pp. 116 – 119, 126– 138 Lecture & Lab Manual	All reading, lect, and lab. 100 pts
Lab 5	DUE: Survey Project Questions Teams critique and submit questions Report: <u>Corrected questions</u> AND <u>Team questions</u> TAs assist with lit search Literature DUE Week 7	Rep: 12 pts
Thursday 10/2	Correlation: making sense of correlational findings <ul style="list-style-type: none"> • Prep for Lab 6: testing the alcohol hypothesis <ul style="list-style-type: none"> - Significance - Effect size (Manual p. 28) <i>Groups</i> : Correlations in the News: Finding 3 rd (lurking) variables,	Ch 6 Pp 142 –157 <i>Omit Calculating r</i>
Week 6 Tuesday 10/7	Survey Project Big Picture Class agree/work on Survey Project Questions <ul style="list-style-type: none"> • Prep for Lab 7 your hypoth: <u>Hyp Questions due next pd.</u> Exams returned	Quiz 5: 10 pts <i>Qz: Lct, txt, corr, prep Lab 6 & Manual P 32</i>
Lab 6	Lab 6 Report: Alcohol Survey Hypothesis Results & Discussion	Rep: 12 pts
Thursday 10/9	DUE at beginning of class: Two Questions for hypothesis Class FINALIZE(edit) Survey Project Questions Help with Survey Project Introduction Literature, rationale and hypotheses <ul style="list-style-type: none"> • Prep for Lab 8: article assignment 	Manual Pp 33 - 36 On next qz
Week 7 Tuesday 10/14	DUE at beginning of class: Lab Prep p. 35 of Manual complete <ul style="list-style-type: none"> • Prep for administering project survey Pick up survey materials Data DUE Lab 9 <i>Activity:</i> comparing survey project predictions	Quiz 6: 10 pts <i>Qz: Manl Pp 33– 36</i> <i>Optional: 5 pts</i>
Lab 7	Bring flash drive to lab this week. DUE: Survey Project Hypothesis and DUE: Article final approval	10 of Survey Project Intro pts
Thursday 10/16	Appointments, <i>scheduled to go over exam</i> & hypothesis help	
Week 8 Tuesday 10/21	The idea of the experiment, “Gold standard”: Self-assigned vs. random assignment Independent & dependent variables & Control groups <i>Groups</i> : matched random assignment in study of cholesterol	Ch 8 Pp. 189 - 197
Lab 8	DUE: Lab 8 Article Assignment, <i>bring highlighted article</i>	15 of Survey Project Intro pts

Thursday 10/23	Advanced Correlational Strategies: Continuum of Internal Validity Partial Correlation, <i>Groups:</i> Partial Correlation Hypotheses, Operational Definition, & Exp vs Corr	Quiz 7: 10 pts <i>Qz: lect & Pp Ch 8</i> Ch 6, p. 157 to end
Week 9 Tuesday 10/28	Advanced Correlational Strategies: Prediction & Directionality Begin sampling <i>Groups:</i> Rethinking news articles re sampling	Ch 7, Pp.167 – 176 (ideas only)
Lab 9	Lab 9 report: enter survey data and do Project Intro Survey Project Introduction DUE end of lab	Project Intro: 30 pts , including pts from Labs 7 & 8
Thursday 10/30	Survey Research: sampling issues & predicting elections <ul style="list-style-type: none"> • Prep for Lab 10: Survey Project Method • Prep for Lab 11: Survey Response Results <i>Groups:</i> Develop a sampling procedure	Ch 5, Pp. 109 – 126 Part is repeat
Week 10 Tuesday 11/4	Review and prep for Midterm <i>Election Day!!!!</i>	Quiz 8: 10 pts <i>Qz: lect & Pp Ch 6 & 5</i>
Lab 10	<i>Bring flash drive..</i> Bring your graded Lab 3 Report. Lab: Take Sample and Do Statistics for Participants Lab 10 rep: Survey Project Method	15 project pts
Thursday 11/6	MIDTERM II Objective & Essay Scantron Form F-289 (F-288 OK) Ch 5 Pp 109 - 126, Ch 6, Ch 7 Pp 167 – 176, Ch 8 Pp 189 - 197 Lecture & Lab Man Pp 28, 32 – 36, and major pts Mid I	
Week 11 Tuesday 11/11	<i>Veterans Day Holiday</i>	
Lab 11 11/12	Be sure to bring <ul style="list-style-type: none"> • Your flash drive with your data. Lab 11 rep: Project Survey Response Results	15 Project pts
Thursday 11/13	Experiments Designs, Randomized Trials and Repeated Measures Variance again, systematic and unsystematic <i>Groups:</i> Using Repeated Measures designs <i>Groups:</i> Experiments, IV & DV	Ch 8, Pp 189 – 197 again & Pp 197 -204
Week 12 Tuesday 11/18	Experiments (cont.) Significance testing <ul style="list-style-type: none"> • Prep Lab 12: Help with Survey Project Hypothesis Results Interpreting significant and non significant results Talking about <i>t</i> test results, i.e. differences (Hyp Results) 	Ch 10 Pp. 246 – 253 & 258 In Depth <i>Bring Lab Manual</i>

Lab 12	Be sure to bring <ul style="list-style-type: none"> • Your flash drive with your data. • Your graded Lab 6 Report. Lab 12 Report: Project Hypothesis Results	15 Project pts
Thursday 11/20	Experiments (continued) <i>Groups:</i> Designing studies: Cor-Exp <i>Groups:</i> Finding the Confounding <ul style="list-style-type: none"> • Prep Lab 13: Help with Survey Project Discussion 	Quiz 9: 10 pts <i>Qz: lect, Pp in Ch 8 & 10, Prep Lab 12</i> Ch 8 Pp.204 - end
Week 13 Tuesday 11/25	DUE at beginning of class: Discussion outline Quasi Experimental Research: “Non equivalent” Control group Time Series Designs Regression to the Mean <ul style="list-style-type: none"> • Prep Lab 14: Help with Survey Project Abstract 	Chapter 12
Lab 13	Drop-dead deadline: any outstanding lab reports Labs 1 - 12	
Thursday 11/27	<i>Thanksgiving !!!!!!!!!!!!!</i>	
Week 14 Tuesday 12/2	<i>Oral Reports TBA</i>	Pts for both days
Lab 13	Be sure to bring <ul style="list-style-type: none"> • DRIVE with ALL Project reports • Corrected Lab Report 12 Lab 13 Report: Project Discussion	15 Project pts
Thursday 12/4	<i>Oral Reports (cont.)</i>	15 pts
Week 15 Tuesday 12/9	Quasi Experimental Research (cont) <i>Groups:</i> design a quasi-experimental intervention study Ethics <i>Groups:</i> an ethical dilemma	Quiz 10: 10 pts <i>Qz: lect & Pp Ch 8, Ch 12, Ch 14</i>
Lab 14	Bring all Graded Survey Project Reports Lab 14 report: Survey Project Abstract DUE: Complete Project	10 Project pts 6 Project pts
Thursday 12/11	Review and prep for final	
Final Exam		