

**PSY 301: Introduction to Research Methods in Psychology**  
**San Diego State University**  
Spring 2009

**INSTRUCTOR:** Allison A. Vaughn, Ph.D

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**LECTURE:** Tuesday/Thursday 12:30pm-1:45pm, LS-246

**OFFICE HOURS:** Tuesday 11:30am-12:30pm, LS-175 (or by appointment)

**PHONE:** 619.594.5536

**LAB:** Tuesday 2:00pm-3:50pm, 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](http://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*, 5<sup>th</sup> Ed., Mark R. Leary, Brooks/Cole.
- *Project Manual Spring 2009*, Sandra Mollenaur
- 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.
  - *If you score less than 60 pts on the first exam, you are required to schedule an appointment to meet with me during class on 3/12 (see schedule below).*
- **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. **You need to turn in all lab assignments to get a grade in this class!**
- **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
<b>EXAMS</b>	2 Midterms	100	200
	FINAL (comprehensive)	150	150
			<b>350</b>
<b>Quizzes</b>	10 (drop one)	10	90
<b>Laboratory</b>	6 Lab Reports	12	72
<b>Oral Report</b>	report & attend/discuss	15	15
<b>Project reports</b>	Survey Project Reports*		100
	Final Report	6	6
			<b>283</b>
<b>Total</b>			<b>633</b>

#### **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
<b>Week 1</b> <b>Thursday</b> <b>1/22</b>	Why science? <i>Class survey</i> Why Literature Searching is important <ul style="list-style-type: none"> <li><b>Prep for Lab 1:</b> Lit Search &amp; Ref pg for PSY 301 Survey</li> </ul> <i>Groups:</i> Asking questions scientifically	Chapter 1
<b>Week 2</b> <b>Tuesday</b> <b>1/27</b>	Course Overview: the PSY 301 Survey and the Class Project <ul style="list-style-type: none"> <li><b>Prep for Lab 2</b> &amp; the open article quiz: Using literature for an Introduction</li> </ul> <i>Groups:</i> Asking questions scientifically	<b>Bring Lab Manual</b> <b>Quiz 1: 10 pts</b> <i>Qz: Lct, Ch 1, &amp; syllabus</i>
<b>Lab 1</b>	<b>BRING Flash drive</b> <b>Lab 1 report:</b> Lit Search and Ref page, PSY 301 Survey	<b>Rep: 12 pts</b>
<b>Thursday</b> <b>1/29</b>	<b>Open article quiz</b> <ul style="list-style-type: none"> <li><b>More help Lab 2,</b> Stating a hypothesis</li> </ul> Review: distributions, <i>SD</i> , & normal curve <i>Groups:</i> procedure medical marijuana/operational definition	<b>Quiz 2: 10 pts</b> <i>Qz: Work Article</i> Ch 5 p. 126 - 138 (not formula p. 136)
<b>Week 3</b> <b>Tuesday</b> <b>2/3</b>	Studying Human Behavior: Variability, variability, variability “Error” vs. systematic variance <i>Groups:</i> Rating Attractiveness: explaining variability	Chapter 2
<b>Lab 2</b>	<b>Lab 2 report:</b> Introduction PSY 301 survey	<b>Rep: 12 pts</b>
<b>Thursday</b> <b>2/5</b>	<b>Survey Project Big Picture:</b> Reporting survey results <ul style="list-style-type: none"> <li><b>Prep for Lab 3:</b> Participants and reporting survey results</li> </ul> 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
<b>Week 4</b> <b>Tuesday</b> <b>2/10</b>	Margin of Error in PSY 301 survey data <ul style="list-style-type: none"> <li><b>Prep for Lab 4:</b> Margin of Error</li> </ul> Variability in true score & measurement Error <i>Groups:</i> Survey Project Topics	<b>Quiz 3: 10 pts</b> <i>Qz: Lct, Ch 2, Pp3</i> Ch 5, Pp. 116 up to strat samp, p. 119
<b>Lab 3</b>	<b>Lab 3 rep:</b> Method & Survey Response Results, PSY 301 Survey	<b>Rep: 12 pts</b>
<b>Thurs</b> <b>2/12</b>	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  <b>Before class:</b> Ch 4, Pp.79 –101

<b>Week 5</b> <b>Tuesday</b> <b>2/17</b>	Writing good survey questions <ul style="list-style-type: none"> <li>• <b>Prep for Lab 5:</b> doing questions</li> <li>• <b>QUESTIONS DUE AT BEGINNING OF Lab 5</b></li> </ul> <i>Groups:</i> Reliability & Validity in measure of Anger Management	<b>Quiz 4: 10 pts</b> <i>Qz: Lect, Txt since Q3</i>
<b>Lab 4</b>	<b>Lab 4 rep:</b> Margin of Error, PSY 301 survey data	<b>Rep: 12 pts</b>
<b>Thursday</b> <b>2/19</b>	Review and prep for Midterm 1	
<b>Week 6</b> <b>Tuesday</b> <b>2/24</b>	<b>MIDTERM I</b> Object & Essay <b>Scantron Form F-288 (Red)</b> Ch 1, 2, 3, 4 Pp. 79 - 101, Ch 5 Pp. 116 – 119, 126– 138 Lecture & Lab Manual	All reading, lect, and lab. <b>100 pts</b>
<b>Lab 5</b>	<b>DUE: Survey Project Questions</b> <b>Teams</b> critique and submit questions <b>Report:</b> <u>Corrected questions</u> AND <u>Team questions</u> TAs assist with lit search <b>Literature DUE Week 7</b>	<b>Rep: 12 pts</b>
<b>Thursday</b> <b>2/26</b>	Correlation: making sense of correlational findings <ul style="list-style-type: none"> <li>• <b>Prep for Lab 6:</b> testing the work hypothesis             <ul style="list-style-type: none"> <li>- Significance</li> <li>- Effect size (Manual p. 28)</li> </ul> </li> </ul> <i>Groups:</i> Correlations in the News: Finding 3 <sup>rd</sup> (lurking) variables,	Ch 6 Pp 142 –157 <i>Omit Calculating r</i>
<b>Week 7</b> <b>Tuesday</b> <b>3/3</b>	<b>Survey Project Big Picture</b> <b>Class agree/work on Survey Project Questions</b> <ul style="list-style-type: none"> <li>• <b>Prep for Lab 7 your hypoth:</b> <u>Hyp Questions due next pd.</u></li> </ul>	<b>Quiz 5: 10 pts</b> <i>Qz: Lct, txt, corr, prep Lab 6 &amp; Manual P 32</i>
<b>Lab 6</b>	<b>Lab 6 Report:</b> PSY 301 Survey Hypothesis Results & Discussion	<b>Rep: 12 pts</b>
<b>Thursday</b> <b>3/5</b>	<b>DUE at beginning of class:</b> Two Questions for hypothesis <b>Class FINALIZE(edit) Survey Project Questions</b> <b>Help with Survey Project Introduction</b> Literature, rationale and hypotheses <ul style="list-style-type: none"> <li>• <b>Prep for Lab 8:</b> article assignment</li> </ul>	Manual Pp 33 - 36 <b>On next qz</b>
<b>Week 8</b> <b>Tuesday</b> <b>3/10</b>	<b>DUE at beginning of class:</b> Lab Prep p. 35 of Manual complete <ul style="list-style-type: none"> <li>• <b>Prep for administering project survey</b></li> </ul> <b>Pick up survey materials</b> <b>Data DUE Lab 9</b> <i>Activity:</i> comparing survey project predictions	<b>Quiz 6: 10 pts</b> <i>Qz: Manl Pp 33– 36</i>
<b>Lab 7</b>	<b>Bring flash drive to lab this week.</b> <b>DUE:</b> Survey Project Hypothesis and <b>DUE:</b> Article final approval	<b>10 of Survey Project Intro pts</b>
<b>Thursday</b> <b>3/12</b>	<b>Appointments, <i>scheduled</i> to go over exam &amp; hypothesis help</b>	

<b>Week 9</b> <b>Tuesday</b> <b>3/17</b>	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
<b>Lab 8</b>	<b>DUE: Lab 8</b> Article Assignment, <i>bring highlighted article</i>	<b>15 of Survey Project Intro pts</b>
<b>Thursday</b> <b>3/19</b>	Advanced Correlational Strategies: Continuum of Internal Validity Partial Correlation, <i>Groups:</i> Partial Correlation Hypotheses, Operational Definition, & Exp vs Corr	<b>Quiz 7: 10 pts</b> <i>Qz: lect &amp; Pp Ch 8</i> Ch 6, p. 157 to end
<b>Week 10</b> <b>Tuesday</b> <b>3/24</b>	Advanced Correlational Strategies: Prediction & Directionality Begin sampling <i>Groups:</i> Rethinking news articles re sampling	Ch 7, Pp.167 – 176 (ideas only)
<b>Lab 9</b>	<b>Lab 9 report:</b> enter survey data and do Project Intro <b>Survey Project Introduction DUE end of lab</b>	<b>Project Intro: 30 pts</b> , including pts from Labs 7 & 8
<b>Thursday</b> <b>3/26</b>	Survey Research: sampling issues & predicting elections <ul style="list-style-type: none"> <li>• <b>Prep for Lab 10:</b> Survey Project Method</li> <li>• <b>Prep for Lab 11:</b> Survey Response Results</li> </ul> <i>Groups:</i> Develop a sampling procedure	Ch 5, Pp. 109 – 126 Part is repeat
<b>**3/31 &amp; 4/2**</b>	<b><i>Spring Break—No Class, No Lab</i></b>	
<b>Week 11</b> <b>Tuesday</b> <b>4/7</b>	Review and prep for Midterm II	<b>Quiz 8: 10 pts</b> <i>Qz: lect &amp; Pp Ch 6 &amp; 5</i>
<b>Lab 10</b>	<b><i>Bring flash drive..</i></b> <b>Bring your graded Lab 3 Report.</b> Lab: Take Sample and Do Statistics for Participants Lab 10 rep: Survey Project Method	<b>15 project pts</b>
<b>Thursday</b> <b>4/9</b>	<b>MIDTERM II</b> Objective & Essay <b>Scantron Form F-289 (F-288 OK)</b> <ul style="list-style-type: none"> <li>• Ch 5 Pp 109 - 126, Ch 6, Ch 7 Pp 167 – 176, Ch 8 Pp 189 - 197 Lecture &amp; Lab Man Pp 28, 32 – 36, and major pts Mid I</li> </ul>	
<b>Week 12</b> <b>Tuesday</b> <b>4/14</b>	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
<b>Lab 11</b>	<b>Be sure to bring</b> <ul style="list-style-type: none"> <li>• <b>Your flash drive with your data.</b></li> </ul> <b>Lab 11 rep:</b> Project Survey Response Results	<b>15 Project pts</b>

<b>Thursday 4/16</b>	Experiments (cont.) Significance testing <ul style="list-style-type: none"> <li><b>Prep Lab 12:</b> Help with Survey Project Hypothesis Results Interpreting significant and non significant results Talking about <i>t</i> test results, i.e. differences (Hyp Results)</li> </ul>	Ch 10 Pp. 246 – 253 & 258 In Depth <b>Bring Lab Manual</b>
<b>Week 13 Tuesday 4/21</b>	Experiments (cont.) Significance testing <ul style="list-style-type: none"> <li><b>Prep Lab 12:</b> Help with Survey Project Hypothesis Results Interpreting significant and non significant results Talking about <i>t</i> test results, i.e. differences (Hyp Results)</li> </ul>	Ch 10 Pp. 246 – 253 & 258 In Depth <b>Bring Lab Manual</b>
<b>Lab 12</b>	<b>Be sure to bring</b> <ul style="list-style-type: none"> <li><b>Your flash drive with your data.</b></li> <li><b>Your graded Lab 6 Report.</b></li> </ul> <b>Lab 12 Report: Project Hypothesis Results</b>	<b>15 Project pts</b>
<b>Thursday 4/23</b>	Experiments (continued) <i>Groups:</i> Designing studies: Cor-Exp <i>Groups:</i> Finding the Confounding <b>Prep Lab 13:</b> Help with Survey Project Discussion	<b>Quiz 9: 10 pts</b> <i>Qz: lect, Pp in Ch 8 &amp; 10, Prep Lab 12</i> Ch 8 Pp.204 - end
<b>Week 14 Tuesday 4/28</b>	<i>Oral Reports TBA</i>	<b>Pts for both days</b>
<b>Lab 13</b>	Drop-dead deadline: any outstanding lab reports Labs 1 - 12	
<b>Thursday 4/30</b>	<i>Oral Reports (cont.)</i>	<b>15 pts</b>
<b>Week 15 Tuesday 5/5</b>	<b>DUE at beginning of class: Discussion outline</b> Quasi Experimental Research: “Non equivalent” Control group Time Series Designs Regression to the Mean <ul style="list-style-type: none"> <li><b>Prep Lab 14:</b> Help with Survey Project Abstract</li> </ul>	Chapter 12
<b>Lab 13</b>	<b>Be sure to bring</b> <ul style="list-style-type: none"> <li><b>DRIVE with ALL Project reports</b></li> <li><b>Corrected Lab Report 12</b></li> </ul> <b>Lab 13 Report: Project Discussion</b>	<b>15 Project pts</b>
<b>Thursday 5/7</b>	Quasi Experimental Research (cont) <i>Groups:</i> design a quasi-experimental intervention study Ethics <i>Groups:</i> an ethical dilemma	<b>Quiz 10: 10 pts</b> <i>Qz: lect &amp; Pp Ch 8, Ch 12 Ch 14</i>



<b>Week 16</b> <b>Tuesday</b> <b>5/12</b>	Review and prep for Final Exam	
<b>Lab 14</b>	<b>Bring all Graded Survey Project Reports</b> <b>Lab 14 report: Survey Project Abstract</b> <b>DUE: Complete Project</b>	<b>10 Project pts</b> 6 Project pts
<b>Thursday</b> <b>5/14</b>	Final Exam	