

Introduction to Research Methods (Psy 301)
Spring 2008

T-Th 9:30 – 10:45am
T 12:00 – 1:50pm (Lab)

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Text: Introduction to Behavioral Research Methods by M. Leary, 5th ed., Brooks/Cole

Other Requirements: 301 Lab Manual by S. Mollenauer
Box of 10 new Maxwell Mac formatted disks or Flash Drive - No PC/IBM disks

Course Description:

The purpose of this course is introduce you to scientific psychology. You will become familiar with research methods used to study human behavior. You will gain experience designing your own survey project. You will learn how to use MS Word, MS Excel and SPSS on IMAC computers. You will learn how to analyze and interpret data as well as how to write an APA style research paper.

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
 - 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.

Evaluation & Grades:

Quizzes: There will be periodic quizzes throughout the semester. The quizzes will cover lecture, lab and textbook material. Each quiz is worth 10 points and you will be able to drop your lowest score. If you miss a quiz, that will be the one dropped. There are **NO** make-up quizzes.

Exams: The exams will be both multiple choice and short answer. Exams will cover lecture information, textbook readings and lab material. Exams are worth 100 points and the comprehensive final will be worth 150 points. You may make up an exam only if you have a serious reason for not taking it and if you contact me in advance.

In-Class Group Activities: There will be five periodic group activities. The activities will be worth three points and you cannot get credit for them unless you are in class. There are **NO** make-up activities.

Oral Report: Toward the end of the semester you will be doing a short (very short) report on a news article that reports some new research finding. You will be working in groups of approximately three so that your own oral report will be very, very, short. We will give you the article together with some hints about how to critique it. Then you and your group will describe the research and do an analysis based on what you have learned in PSY 301.

Lab:

Assignments: Be sure to check your lab manual *before* lab. For most labs there will be an assignment that you need to do in advance and bring to 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., the section in which you are officially enrolled). Never insert a disk *before* you have mailed in your assignment, otherwise 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 for some reason, the lab report is still due but is worth only half the points. You can revise Lab 1 (after receiving feedback) and the option to revise one additional report for additional (not the full number of possible) points.

Survey Project: The class will work together to construct a survey on a topic that interests everyone. You will then work individually collecting your own data, analyzing it and writing a report. There is class time allotted for working on this project. As noted in the class schedule, you will turn in individual sections of the project during the semester. You must complete the survey project to receive a grade in the class.

		<u>Points Each</u>	<u>Total Points</u>
Exams:	2 midterms	100	200
	1 final	150	150
	(comprehensive)		
Quizzes:	10 (can drop 1)	10	90
Lab:	6 lab reports	12	72
In-class	5	3	15
Oral Report	1	10	10
Project	Survey Project Reports*		100
	Final Report		6
Total:			643

***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

In determining your grade we have two major concerns:

- 1) Have you shown that you understand and can apply the principles learned, as shown in your **performance on exams**?
- 2) Have you demonstrated that you can work consistently and independently to produce quality work, as shown by your **performance on labs, the project, and quizzes**?

We consider these two 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** average **A or B on the other components.**

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

	A = 94% & above	A- = 90 - 93%	
B+ = 87 - 89%	B = 83 - 86%	B- = 80 - 82%	
C+ = 77 - 79%	C = 73 - 76%	C- = 70 - 72%	
D+ = 67 - 69%	D = 63 - 66%	D- = 60 - 62%	
	F = 59 & below		

Class Schedule

<u>Date</u>	<u>Topic</u>	<u>Reading/Assignments</u>
<u>Week 1</u>		
Lec T (Jan 22)	-Course overview -Alcohol Survey/Method Sections -Prep for lab 1: Method (Alcohol Survey)	-Bring Lab Manual
Lab (1) T (Jan 22)	-Bring Maxwell Mac Formatted Disks or Flash Drive -Lab 1 Report: Method (Alcohol Survey)	-Report: 12 pts
Lec Th (Jan 24)	-Prep for lab 2: Writing an Introduction (Alcohol survey) -Using literature -Stating a hypothesis -Scientific Method	-Bring Lab Manual & Article -Ch. 1
<u>Week 2</u>		
Lec T (Jan 29)	-Scientific Method cont. -Distributions, sd & normal curve	-Ch. 1 -Ch. 5, Pp.126-138

<u>Date</u>	<u>Topic</u>	<u>Reading/Assignments</u>
Lab (2) T (Jan 29)	-Lab 2 Report: Introduction (Alcohol Survey)	-Report: 12 pts
Lec Th (Jan 31)	-Distributions, sd & normal curve cont. -Prep for lab 3: Participants & reporting survey results	-Quiz #1 Ch. 1: 10pts -Ch. 5, Pp.126-138 -Bring Lab Manual
Week 3		
Lec T (Feb 5)	-Survey Project: Big Picture -Distributions, sd & normal curve cont. -Explaining (accounting for) variability in behavior	-Ch. 5, Pp.126-138 -Ch. 2
Lab (3) T (Feb 5)	-Bring corrected Lab Report 1 -Lab 3 Report: Method & Survey Response Results (Alcohol Survey)	-Report: 12 pts
Lec Th (Feb 7)	-Error variance vs systematic variance -Margin of error; confidence intervals -Prep for lab 4: Margin of Error in Survey Research -Groups(1): Possible Survey Topics (3 points)	-Quiz #2 Ch. 5: 10pts -Ch. 2 Ch.5 Pp.116-117 -Bring Lab Manual
Week 4		
Lec T (Feb 12)	-Survey research: writing good survey questions -Vote on Survey topics	-Ch. 4 pp.90-101
Lab (4) T (Feb 12)	-Lab 4 Report: Margin of Error (Alcohol Survey)	-Report: 12 pts
Lec Th (Feb 14)	-Measurement scales & reliability -Groups(2): Measuring pulse rate: true score vs observed score (3 pts) -Prep for lab 5: Writing survey questions	-Ch. 3 Pp.55-67 -Bring Lab Manual
Week 5		
Lec T (Feb 19)	-Observation strategies -Exam Review	-Quiz #3 Pp. 55-67 -Ch.4 Pp.79-90
Lab (5) T (Feb 19)	-Lab 5 Report: Survey Project Questions -Teams: critique & submit questions -Corrected questions & team questions -TA's assist with Literature search – due week 7	-Report: 12 pts
Lec Th (Feb 21)	-Exam 1 (MC & Short Answer) – scantron 882 -chs. 1, 2, 3, 4, 5 (pp.116-117; 126-138), Lec & Lab	- 100 pts

<u>Date</u>	<u>Topic</u>	<u>Reading/Assignments</u>
<u>Week 6</u>		
Lec T (Feb 26)	-Work on survey questions -Prep for lab 6: Alcohol hypothesis results -Prep for lab 7: YOUR hypothesis	-Bring Lab Manual -Bring Lab Manual
Lab (6) T (Feb 26)	-Lab 6 Report: Hypothesis Results (Alcohol Survey) -Report: 12pts	
Lec Th (Feb 28)	-Due: pre lab p.35 of manual -Correlation -Work on survey questions - finalize -Prep for lab 8: Article Assignment	-Ch.6 Pp.142-159
<u>Week 7</u>		
Lec T (Mar 4)	-Correlation cont. -Activity: comparing predictions -Prep for administering surveys – data due Lab 9 -Help with Hypotheses	-Ch.6 Pp.142-159
Lab (7) T (Mar 4)	-Bring flash drive to lab -Due: Survey Project Hypothesis -Due: Article Final Approval	-10 of Survey Project Intro Pts
Lec Th (Mar 6)	-Scheduled appointments to go over Exam 1	
<u>Week 8</u>		
Lec T (Mar 11)	-T-tests (general overview) - Experimental research – IV & DV	-Quiz #4 Correlation Ch.10 p.253 -Ch.8 Pp.189-201
Lab (8) T (Mar 11)	-Lab 8 Report: Article Assignment -bring highlighted article	-15 of Survey Project Intro pts
Lec Th (Mar 13)	- Experimental research – IV & DV -Groups(3): converting correlations to experiments (3pts)	-Ch.8 Pp.189-201
<u>Week 9</u>		
Lec T (Mar 18)	- Partial correlation - Groups(4): Partial correlation (3 pts)	-Quiz #5 Pp.189-201 -Ch. 6 Pp.159-161
Lab (9) T (Mar 18)	-Lab 9: Survey data & Introduction -Bring graded lab reports (2, 7 & 8) -Enter survey data -Due: Survey Project Introduction	-Project Intro: 30 pts
Lec Th (Mar 20)	- Margin of error & sampling -Prep for lab 10: Survey project Method	-Ch. 5 Pp.118-128 -Bring Lab Manual

<u>Date</u>	<u>Topic</u>	<u>Reading/Assignments</u>
Week 10 Lec T (Mar 25)	-Brief Lab 11 Prep (heads up) -Finish any exam information - Exam Review	-Quiz #6 Pp.118-128 -Bring Lab Manual
Lab (10) T (Mar 25)	-Bring flash drive to lab -Bring graded Lab 3 Report to lab -Take sample & do statistics for Participants -Lab 10 Report: Survey Method	-15 Project pts
Lec Th (Mar 27)	Exam 2 (MC & Short Answer) – scantron 882 (chs. 5 (pp.118-128), 6 (pp.142-161), 8 (pp.189-201), 10 (p.253); Lec & Lab; Exam 1 information	-100 pts
SPRING BREAK!!!!!!!!!!!!!!!!!!!!!!		
Week 11 Lec T (Apr 8)	-T-tests -Analyzing experimental data -Prep for lab 11: Survey project response results	-Ch.10 Pp. 246-258 -Bring Lab Manual
Lab (11) T (Apr 8)	-Bring flash drive with data to lab -Lab 11 Report: Survey Response Results	-15 Project pts
Lec Th (Apr 10)	-Analyzing experimental data (cont.) -Experimental control/confounds -Prep for lab 12: Survey project hypothesis results	-Quiz #7 (t-test): 10pts -Ch.8 Pp.201 - end -Bring Lab Manual
Week 12 Lec T (Apr 15)	-Experimental control/confounds -Groups(5): confounds (3 pts) -Designing experiments	-Ch.8 Pp.201 - end -Ch.9 Pp.224-237
Lab (12) T (Apr 15)	-Bring flash drive with data to lab & graded Lab 6 -Lab 12 Report: Survey Hypothesis Results	-15 Project pts
Lec Th (Apr 17)	-Quasi-experimental design -Prep for lab 13: Survey project discussion	-Quiz #8 Pp. 201-end: 10pts -Ch.12 -Bring Lab Manual
Week 13 Lec T (Apr 22)	-Due: Discussion Outline -Quasi-experimental design (cont.)	-Bring Lab Manual -Ch.12
Lab (13) T (Apr 22)	-Bring flash drive or disks with ALL survey project reports & graded Lab 12 report -Lab 13 Report: Survey Discussion	-15 Project pts

<u>Date</u>	<u>Topic</u>	<u>Reading/Assignments</u>
Lec Th (Apr 24)	-Ethics -Prep for lab 14: Survey project abstract	-Quiz #9 Ch.12: 10pts -Ch.14 -Bring Lab Manual
<u>Week 14</u> Lec T (Apr 29)	-Oral Reports TBA	
Lab (14) T (Apr 29)	-Bring ALL graded survey project report -Lab 14 Report: Survey Abstract -COMPLETE PROJECT DUE	-10 Project pts -6 Project pts
Lec Th (May 1)	-Oral reports TBA	
<u>Week 15</u> Lec T (May 6)	-Final Exam Review	-Quiz #10 Ch.14: 10pts
Lab (15) (May 6)	-Graded Survey Projects Returned	
Lec Th (May 8)	-Final Exam Review	

Final Exam Tuesday May 13 10:30am – 12:30pm