

## **Psychology 310: Psychological Research Design and Analysis (Sec. 2)**

*Brigham Young University*

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**Office:** 1151 SWKT  
**Office hours:** By appointment  
**Class time:** Monday, Wednesday, & Friday 10-11:50am Jesse Knight Building Rm. 2104

### **Prerequisites**

PSYCH 210 (History of Psychology), PSYCH 307 (Writing Within Psychology), PSYCH 308 (Psychological Statistics); or instructor's consent.

### **Course Description**

Students learn basic theories and principles of designing, conducting, and reporting psychological investigations.

### **Learning Objectives**

1. Students will be able to identify and think critically about the paradigms from which their own and published research is conducted.
2. Students will be able to critically review the literature to generate a testable hypothesis based on a summation of current research findings and scientific thought.
3. Students will be able to distinguish between methodological designs and implement and execute an appropriate design to test the hypothesis, demonstrating an understanding of and sensitivity to relevant ethical considerations, including how to identify and measure dependent variables and measure or control for independent and other variables critical to the design of the study.
4. Students will be able to prepare a written report of the research project adhering to APA style in all aspects of presentation (e.g., format, figures/tables, referencing) in a format that would be suitable to submit to an APA journal.
5. Students will be able to present the research orally to an audience of peers in either a paper or poster format.
6. Students will be able to critically evaluate the quality of published research.

### **General Values**

*In addition to pursuing the course objectives listed above, by remaining in this course, students and teachers should agree to live by these general values. In other words, each participant in the course should endeavor to embrace and act in accordance with these values, and the course is designed to help promote these values.*

1. Take personal responsibility for your learning
  - a. Ask questions when you don't understand something.

- b. Come prepared to participate in discussions.
- 2. Virtues and skills that promote success
  - a. Respect and charity toward instructor and fellow students
    - i. Recognize the humanity, intelligence, morality, and spirituality of others
    - ii. Acknowledge that disagreements are possible among humane, intelligent, morally upstanding, and spiritually engaged individuals and groups.
    - iii. Conversely, recognize that disagreement does not equal disrespect.
  - b. Humility
    - i. Be open to correction and improvement.
    - ii. Be aware of the limits of your own perspective(s).
  - c. Critical thinking
    - i. Search for the strengths AND limitations of various perspectives
    - ii. "Metacognition" – learn to be reflective about your own perspectives, how they develop, what they imply, what their strengths and limitations are, and why you embrace them.
    - iii. Improve ability to understand and appreciate multiple perspectives. Seek to understand the perspective from which others' ideas and behaviors make sense.
  - d. Trust that you can do difficult things
  - e. Remember the law of the harvest!!! You reap what you sow!

### **Course Materials:**

Mertens, D. M. (2014). *Research and Evaluation in Education and Psychology: Integrating Diversity With Quantitative, Qualitative, and Mixed Methods* (4<sup>th</sup> ed.). Sage Publications, Inc. ISBN: 978-1452240275

Yockey, R. D. (2011). *SPSS Demystified: A Step by Step Guide to Successful Data Analysis* (2<sup>nd</sup> ed.). Prentice Hall/Pearson. ISBN: 978-0205735822

### **Grading Scale and Policy**

The following table shows the minimum percentage that must be earned in the class for the corresponding letter grade. *Note: Grades will not be rounded – for example, an 89.5% is a B+.*

A	93%
A-	90%
B+	87%
B	83%
B-	80%
C+	77%
C	73%
C-	70%
D+	67%

D	63%
D-	60%
F	0%

### Grade Breakdown

Examinations (Mid-term and Final)	40%
Papers (Paradigm Paper and IRB)	34%
Final Presentation	6%
Homework	8%
Participation & Preparation	<u>12%</u>
	100%

### Late work

If you will miss an exam for any reason, you will need to notify the professor *prior* to the examination for consideration to be administered a “make-up” test (if you fail to do so you may receive a 0% on the test). If a make-up test is administered there will be a 10% penalty (unless the absence is associated with a University-sponsored activity that is approved in writing by the University, or medical emergencies for which you have a physician’s note).

Effective time-management is a key component of successful research. We could all be better researchers if we had unlimited time. However, there are certainly life situations that may prevent you from turning in assignments on time. In order to balance these issues and to provide you with some flexibility, a tiered grading system will be used to assess late work. If you miss a deadline to turn in an assignment, for any reason other than medical emergencies, you will have until 5:00pm on that day to turn in the assignment for a 5% deduction. After 5:00pm, you then have up to the next PSYCH 310 class period to turn it in for a 10% deduction. Following that, you will receive a 20% deduction.

### Course Assignments

1. Exams – 200 Points (40 % of final grade)
  - a. There will be two exams in the course. The midterm exam will cover the material from the first half of the course, and the final exam will cover the material from the second half. Both exams will be worth 100 points. Each exam will have some combination of multiple-choice, short answer, and/or essay questions.
    - i. Emphasized Objectives: 1, 2, 3, 4, 5, 6
2. Papers – 170 Points Total (34% of final grade)
  - a. Paradigm Paper (70 Points)
    - i. Name and discuss your own paradigm. Identify your personal theory of axiology, ontology, epistemology, and methodology and defend why you hold those particular views. If you identify with the (post)positivist,

constructionist, transformative, or pragmatic paradigms, please name which one and defend each of the four basic beliefs of that paradigm. The paper should be well organized and show your critical thinking process. You are not required to include outside sources for this paper, but any sources that are included must be properly cited. This paper should be 4-5 pages long.

- ii. Emphasized Objectives: 1, 3, 6
- b. IRB submission (100 Points)
  - i. You will be required, in groups of 4-5, to formulate a research question and testable hypotheses. As a group, you will be responsible for conducting a literature review, stating specific hypotheses, planning appropriate statistical analyses, and completing an IRB proposal according to the guidelines put forth by BYU's Office of Research and Creative activities (see <http://orca.byu.edu/irb/Forms.php>). You and your group members are responsible for assessing which forms/appendices will need to be submitted. 20% of your grade on this assignment will be based upon group members' descriptions of your involvement on the project. The other 80% will be based upon the IRB proposal you submit as a group. Although group projects present unique challenges, learning to work with a research team is important preparation for graduate school and a career in psychology.
  - ii. Emphasized Objectives: 2, 3, 4, 6
- 3. Presentations– 30 Points Total (6% of final grade)
  - a. Final Presentation (30 points)
    - i. In groups of 4-5, students will present the back ground, hypotheses, methods, results, and discussion of their group research project. It is expected that each student will present approximately equal amounts of information throughout the 20 minute presentation. As with the IRB proposal, 20% of your grade on this project will be based upon group members' rankings of your involvement.
    - ii. Emphasized Objectives: 2, 3, 5
- 4. Homework – 40 Points (8% of final grade)
  - a. SPSS Demystified
    - i. Complete 4 each so that your whole group completes all 16
      - 1. You may work with individuals with on the same modules, however you must both do the work, and write-ups must be completed separately.
    - ii. Make note of examples of how the tool could be used for questions relevant to group project
- 5. Class Participation & Preparation– 60 Points Total (12% of final grade)
  - a. Preparation
    - i. Each day, you will write and bring a paragraph to class that applies the content from that day's reading to your group's study idea. At the

beginning of class, you will discuss the reading's implications for your study as groups, and turn in your paragraphs.

b. Participation

- i. Students are expected to attend and participate in class. This does not necessarily mean that each student must speak in class each week. As long as students are in attendance and clearly show that they are focused and attentive to class discussions, they will receive full points.

c. Emphasized Objectives: 1, 2, 3, 5, 6

### Course Schedule

Date	Topic	Assignment
6/23	Introduction, syllabus, & course overview	
6/25	Theoretical Assumptions & the four main paradigms	Mertens, Ch.1
6/27	Literature Review & Potential Research Topics	Mertens, Ch. 3
6/30	Sampling	Mertens, Ch. 11 <b>Form groups, and email instructors the full names of each member by <u>midnight</u></b>
7/2	Data Collection	Mertens, Ch. 12
7/4	<b>4<sup>th</sup> of July! No Class!</b>	Nothing-you lucky duck!
7/7	Data Analysis & Interpretation	Mertens, Ch. 13 <b>Paradigm Paper Due</b>
7/9	Experimental & Quasi-Experimental Research	Mertens, Ch. 4
7/11	Experimental & Quasi-Experimental Research Cont'd	<b>Annotated Bibliography Due</b>
7/14	Causal Comparative & Correlational Approaches	Mertens, Ch. 5 <b>Research Question and Group Hypotheses Due &amp; Division of Responsibilities due <u>midnight</u></b>
7/16	Midterm Review & SPSS Workshop	<b><u>MID-TERM OPENS</u></b> No Reading, because we are awesome and reasonable instructors
7/18	Survey Methods	Mertens, Ch. 6
7/19	No Class (Who wants to come to class on a Saturday?)	<b><u>MID-TERM CLOSES</u></b>
7/21	Single-Case Research	Mertens, Ch. 7
7/23	IRB Proposal Workshop -- Meet in	Be prepared to work on the proposal in

	Computer Lab	class; see Mertens' Appendix: "Writing the Research Proposal" p. 465-469
7/25	Qualitative Methods	Mertens, Ch. 8
7/28	Narrative Research	Mertens, Ch. 9
7/30	SPSS Workshop	Bring SPSS Demystified with you!
8/1	Mixed Methods	Mertens, Ch. 10
8/4	IRB Proposal Workshop -- Meet in Computer Lab	Be prepared to work on the proposal in class; see Mertens' Appendix: "Writing the Research Proposal" p. 465-469 <b>IRB Proposal &amp; SPSS Results Due at Midnight</b>
8/6	Presentation Workshop -- Meet in Computer Lab	
8/8	Final Presentations	
8/11	Final Presentations & Exam Review	
8/13	<b>FINAL EXAM 11:00am-12:50pm</b>	Good luck!

## University Policies

### **BYU Honor Code**

In keeping with the principles of the BYU Honor Code, students are expected to be honest in all of their academic work. Academic honesty means, most fundamentally, that any work you present as your own must in fact be your own work and not that of another. Violations of this principle may result in a failing grade in the course and additional disciplinary action by the university. Students are also expected to adhere to the Dress and Grooming Standards. Adherence demonstrates respect for yourself and others and ensures an effective learning and working environment. It is the university's expectation and my own expectation in class, that each student will abide by all Honor Code standards. Please call the Honor Code Office at 422-2847 if you have questions about those standards.

### **Preventing Sexual Discrimination and Harassment**

Title IX of the Education Amendments of 1972 prohibits sex discrimination against any participant in an educational program or activity that receives federal funds. The act is intended to eliminate sex discrimination in education. Title IX covers discrimination in programs, admissions, activities, and student-to-student sexual harassment. BYU's policy against sexual harassment extends not only to employees of the university, but to students as well. If you encounter unlawful sexual harassment or gender-based discrimination, please talk to your professor; contact the Equal Employment Office at 422-5895 or 367-5689 (24-hours); or contact the Honor Code Office at 422-2847.

### **Students with Disabilities**

Brigham Young University is committed to providing a working and learning atmosphere that reasonably accommodates qualified persons with disabilities. If you have any disability which

may impair your ability to complete this course successfully, please contact the Services for Students with Disabilities Office (422-2767). Reasonable academic accommodations are reviewed for all students who have qualified, documented disabilities. Services are coordinated with the student and instructor by the SSD Office. If you need assistance or if you feel you have been unlawfully discriminated against on the basis of disability, you may seek resolution through established grievance policy and procedures by contacting the Equal Employment Office at 422-5895, D-285 ASB.

### **Academic Honesty Policy**

The first injunction of the BYU Honor Code is the call to be honest. Students come to the university not only to improve their minds, gain knowledge, and develop skills that will assist them in their life's work, but also to build character. President David O. McKay taught that 'character is the highest aim of education' (The Aims of a BYU Education, p. 6). It is the purpose of the BYU Academic Honesty Policy to assist in fulfilling that aim. BYU students should seek to be totally honest in their dealings with others. They should complete their own work and be evaluated based upon that work. They should avoid academic dishonesty and misconduct in all its forms, including but not limited to plagiarism, fabrication or falsification, cheating, and other academic misconduct.

### **Plagiarism Policy**

Writing submitted for credit at BYU must consist of the student's own ideas presented in sentences and paragraphs of his or her own construction. The work of other writers or speakers may be included when appropriate (as in a research paper or book review), but such material must support the student's own work (not substitute for it) and must be clearly identified by appropriate introduction and punctuation and by footnoting or other standard referencing.

### **Classroom Technology**

Use of laptops or other products can be helpful and are allowed to students who wish to use them to take notes. However, they can be distracting if used for other purposes. In order to prevent distracting other students (or being distracted yourself), focus on only taking notes for class, but nothing else, even if you think it is distantly related to class (for example, doing your homework during a class discussion is not appropriate even though it is a class-related activity.) Our policy is to trust students until we are given a reason not to trust them. Details will be discussed on the first day of class.