

Psychological Research Design and Analysis (Psych 302)

Syllabus

BYU Motto: The Glory of God is Intelligence

Class Motto: Seek ye out of the best books words of wisdom; seek learning, even by *study* and also by *faith* (D&C 88:118). Faith is a principle of *action* and of *power* (Bible Dictionary). Arouse your faculties, even to an *experiment* upon my word, and *exercise* a particle of faith (Alma 32:27).

Class Quotes: “To be able to understand what something is you have to be able to use it.”

Plato

“The best way to learn the truth of the Gospel of Jesus Christ is to test it.”

Gordon B. Hinckley

“The time will come when no man or woman will be able to endure on borrowed light. Each will have to be guided by the light within himself.”

Heber C. Kimball

“We have never been encouraged to be blindly obedient; it is an intelligent obedience that characterizes members of the church.”

L. Tom Perry

“The problems of this world cannot be solved by the level of thinking that created them.”

Albert Einstein

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Office hours: By appt.

REQUIRED PACKET:

Steffen, P.R., & Haslam, M. (2008). *A Student Guidebook for Conducting Research in Psychology: A Step-by-Step Guide for Conducting your own Research Project*. Provo, UT: BYU Academic Publishing.

REQUIRED TEXT:

American Psychological Association (2001). *Publication Manual of the American Psychological Association* (5th ed.). Washington, DC: American Psychological Association.

IMPORTANT POINTS:

1. This is a time intensive class that will require a lot of work. The BYU undergraduate catalog states that “The expectation for undergraduate courses is three hours of work per week per credit hour for the average student who is appropriately prepared; much more time may be required to achieve excellence (p. 48).” **This is a three credit class so the expectation is at least 9 hours per week out of class spent in reading and assignments.**

2. PSYCHOLOGY 301 (PSYCHOLOGICAL STATISTICS) OR THE EQUIVALENT IS A PREREQUISITE FOR THIS CLASS

TESTS AND ASSIGNMENTS

KNOWLEDGE BASE

Basic knowledge and principles of research methods will be tested via four multiple choice reading quizzes, a midterm exam, and a final exam. The multiple-choice reading quizzes are given to encourage reading the relevant chapters before coming to class. The quizzes will be administered on blackboard and must be completed before class time. The exams will contain essay, short answer, and multiple choice questions.

RESEARCH PROCESS AND SKILLS

COME PREPARED TO PARTICIPATE. Bring the class packet and research team materials to each class. You will receive a grade each class on your preparedness to participate as well as your actual participation.

TEAM PARTICIPATION AND EVALUATION. Each week you will meet as a research team and work on your experiment. This will give you the chance to apply the principles that are being discussed in class and will let you gauge your understanding of research principles. Your peers on your research team will rate the amount of effort you have put into the team assignments. The rules you establish as a team will also be used to judge your team participation. Attendance will also factor into your peer rating score (if you are not attending team meetings, you are not helping complete the team project).

IRB PROPOSAL. The IRB proposal will be completed as a team and will receive a grade. A copy of the IRB proposal forms can be obtained at <http://orcadev.byu.edu/>. Each student is also required to go through the IRB tutorial and turn in the certificate of completion with the IRB proposal. This training exercise is found at the same web address. Research projects require previous approval from Dr. Steffen and the Institutional Review Board (IRB) before beginning.

POSTER AND POWERPOINT PRESENTATIONS. Teams will present their research in two formats. In week 13 teams will present a poster of their experimental findings. In weeks 6 and 14 teams will present their experiment using PowerPoint presentations.

FINAL PAPER. The first complete draft of the final paper is due at the beginning of the 12th class. The final team experiment paper is due at the beginning of the last class- no exceptions.

OTHER INFORMATION

LATE ASSIGNMENTS

Late assignments will be docked one full grade for each day (or fraction thereof) late. If an assignment is late by 3 days or more, the maximum possible grade is a C-. There will be no exceptions.

HONOR CODE STANDARDS

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 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.

LEARNING OUTCOMES

Each program at BYU has developed a set of expected student learning outcomes. These will help you understand the objectives of the curriculum in the program, including this class. To learn the expected student outcomes for the programs in the psychology department and college go to <http://learningoutcomes.byu.edu> and click on the College of Family, Home and Social Sciences and then the psychology department. We welcome feedback on the expected student learning outcomes. Any comments or suggestions you have can be sent to <FHSS@byu.edu>.

GRADING

	TOTAL POINTS	GRADE
FIRST HALF OF CLASS		
(PICK TOPIC, CREATE HYPOTHESES, DESIGN STUDY)		
READING QUIZ 1	50	_____
READING QUIZ 2	50	_____
MIDTERM EXAM	200	_____
ATTENDANCE AND TEAM GRADE	50	_____
POWERPOINT PRESENTATION	25	_____
IRB PROPOSAL	25	_____
INTRODUCTION AND METHOD PAPER	100	_____
SECOND HALF OF CLASS		
(CONDUCT STUDY, ANALYZE RESULTS, COMMUNICATE FINDINGS)		
READING QUIZ 3	50	_____
READING QUIZ 4	50	_____
FINAL EXAM	200	_____
ATTENDANCE AND TEAM GRADE	50	_____
POSTER PRESENTATION	25	_____
POWERPOINT PRESENTATION	25	_____
RESULTS AND DISCUSSION PAPER	100	_____
TOTAL POINTS	1000	_____
FINAL GRADE		_____

IMPORTANT DATES

Week 2 (Jan. 14): Reading Quiz #1 (Introduction and chapters 1 to 3)

Week 3 (Jan. 21): Bring 3 research articles to class (each team member)

Week 4 (Jan. 28): Reading Quiz #2 (Textbook chapters 4-6)

Week 5 (Feb. 4): Come to class

Week 6 (Feb. 11): Complete Draft of Introduction and Method (bring hard copy to class and email to Dr. Steffen)

PowerPoint presentations (email PowerPoint the day before to Dr. Steffen)

Week 6 (Feb. 12-14): Midterm in testing center Thursday, Friday, and Saturday

Week 7 (Feb. 18): Complete IRB due; Intro and Method Revision due

Week 8 (Feb. 25): Reading Quiz #3 (Textbook chapters 7 to 9)

Weeks 8-10 (Feb. 25 to March 11): Collect data (as soon as you receive IRB approval)

Week 11 (March 18): Reading Quiz #4 (Textbook chapters 10 to 12)

Week 11 (March 18): Experimental data collected and entered into a SPSS dataset and brought to class for analysis

Week 12 (March 25): Complete draft of final paper due (bring hard copy to class and email to Dr. Steffen)

Week 13 (April 1): Poster due, posters presented in class

Week 14 (April 8): PowerPoint due (email PowerPoint to Dr. Steffen), PowerPoint presentations in class

Week 14 (April 8): Final Paper (email to Dr. Steffen)

Final Exam: during finals week in Testing Center

CLASS SCHEDULE

WEEK	Lecture / LAB	QUIZ/EXAM	ASSIGNMENT DUE
CONSTRUCTING KNOWLEDGE USING RESEARCH			
1 1/7	Becoming an Expert Researcher DEVELOP TEAM AND SELECT TOPIC		Team contract (done in class)
2 1/14	Reading and Evaluating Research Articles EVALUATE AND ANNOTATE ARTICLE	Quiz Intro, 1-3	
3 1/21	Developing Theory and Hypotheses CREATING A LOGICAL OUTLINE		Annotation
CONCEPTUALIZING AND DESIGNING RESEARCH			
4 1/28	Research Writing THE DRAFT WRITING PROCESS	Quiz 4-6	
5 2/4	Designing your Experiment/ Ethics and the IRB FILLING OUT THE IRB APPLICATION		
6 2/11	Presenting your Research Proposal	MIDTERM in Testing Center	Complete Draft of Introduction/Method PowerPoint Presentations
CONDUCTING AND ANALYZING RESEARCH			
7 2/18	The Logic of Experimentation SPSS: ORGANIZING DATA		Complete IRB Revised Intro and Method
8 2/25	Evaluating Experimental Manipulations and Data Quality SPSS: DESCRIBING DATA AND <i>t</i> -TESTS	Quiz 7-9	Collect data (as soon as IRB gives approval)
9 3/4	Analyzing Basic Experimental Designs SPSS: GLM		
10 3/11	Analyzing Advanced Experimental Designs SPSS: GLM, INTERACTION AND COVARIANCE		
COMMUNICATING RESEARCH RESULTS			
11 3/18	Writing the Results and Discussion WRITING, EDITING, REVISING, AND APA STYLE	Quiz 10-12	Experimental data entered into SPSS and brought to class
12 3/25	Creating and Presenting Posters and Papers PUTTING IT ALL TOGETHER		Complete Draft of Final Paper
13 4/1	Integration and Review PRESENT POSTER		Poster Presentations
14 4/8	Presenting your Research Findings PRESENT POWERPOINT		PowerPoint Presentations Final Paper
	FINAL EXAM DURING FINALS WEEK	FINAL EXAM in Testing Center	