

RESEARCH METHODS
PSYC 3340 (CRN 29448) Spring 2022
Experimental Psychology for Psychology Minors
Physical Sciences Building, Room 208
Mondays & Wednesdays 1:30 pm to 2:50 pm

Instructor: Lawrence Cohn, Ph.D.
Office: 118 Psychology Building
Contact Info: E-mail: Lcohn@utep.edu; Phone: 747-6567

In-Person Office Hours: Mondays 3:00 to 4:20 p.m.
Virtual Office Hours: Tuesdays 10:30 to 11:50 a.m.
or by appointment

Teaching Assistant: To be announced

Textbook: *Research Methods in Psychology: Evaluating a World of Information* (3rd edition, 2018) by Beth Morling, W.W. Norton & Company, New York, N.Y. Available via Amazon and other platforms.

Note: To ensure that you don't fall behind in your readings while ordering and obtaining the textbook, I have uploaded the first three assigned chapters to our Blackboard course shell. Just go to the Home Page of our Blackboard course shell, scroll down to the folder labeled "Initial Book Chapters", and download the chapters in pdf format.

Additional Readings: I will provide 'pdf' copies of additional readings. These readings will be uploaded to the folder labeled "Weekly Readings" within our course shell in Blackboard. Readings include the following:

1. Rosenthal, R. (1965). *Clever Hans: a case study of scientific method*. In *Clever Hans* (the horse of Mr. Von Osten, by Oskar Pfungst, Edited by R. Rosenthal, 1965, Holt, Rinehart, and Winston, New York, N.Y.
2. Lilienfeld, S.O., Lynn, S.J., Ruscio, J., & Beyerstein, B.L. (2010). *50 great myths of popular psychology*. Wiley-Blackwell, Malden, MA. [We will read selected chapters]
3. *Memorandum Opinion* (December 20, 2005): Case No. 04cv2688
Tammy Kitzmiller, et al. vs Dover Area School District. [We will read selected pages of the Judge's ruling regarding the 'theory' of Intelligent Design and whether this 'theory' can be taught in high school science classes]

WELCOME!!! This course will introduce you to many important concepts, research designs, measurement issues, and conceptual debates underlying research findings in psychology and the behavioral sciences. We also will discuss the distinction between science and pseudoscience, the alleged replication crisis in psychology, and the strengths and weaknesses of experimental, correlational, and observational research. The material that we review in the course is quite exciting and has implications for many majors, disciplines, professions, and everyday decisions.

To help introduce key issues in behavioral and social science research methods, we will spend time discussing several extraordinary claims and phenomena, including the following:

- 1) a remarkable horse (named Clever Hans) that allegedly solved complicated math problems;
- 2) dowsing rods that are used to, allegedly, find hidden sources of water and minerals;
- 3) *facilitated communication* techniques that allegedly help autistic children communicate extensively with parents and teachers;
- 4) a world renowned psychic (Uri Geller) who claimed to communicate telepathically and bend spoons using mental powers (and we will watch videos of Geller and other individuals allegedly displaying these feats);
- 5) a world famous magician's million dollar commitment to pay anyone who demonstrates paranormal ability under controlled scientific conditions;
- 6) a fascinating court case involving claims that 'intelligent design' should be taught in high school science classes as an alternative to Darwin's theory of evolution (and we will read a portion of the judge's legal 'opinion').

We will design studies to test several of the latter remarkable claims and phenomena. We won't conduct the studies themselves but we will identify the necessary experimental design features that would have to underlie rigorous tests of each claim. The latter exercises and discussions will lay the foundation for much of the course. We will also discuss key principles guiding the ethical conduct of research with animals and humans.

The course has several goals, including 1) increasing your knowledge of key research design issues in the psychology and the behavioral sciences, 2) increasing your empirical orientation towards knowledge, and 3) increasing your ability to draw connections between research and your everyday life. More generally, the course should increase your ability to think in terms of evidence, and 'quality of evidence', when evaluating claims about human behavior and mental processes.

IMPORTANT NOTE: If I contract COVID-19 then I will have to quarantine for a period of time. If this occurs, then I will use Zoom to conduct our classes each week until I have permission to return to campus. I will notify you if I contract COVID-19 and need to teach part of the course via Zoom. If I do teach part of the course via Zoom then please use the following instructions to access our class via Zoom (**accessing the class virtually will only be available if I test positive for the coronavirus**):

1. Go to the HOME PAGE in our class shell on Blackboard
2. Click on the folder labeled "Virtual Class if Instructor Contracts COVID-19"
3. Click on "Link to join our Virtual Class"
4. Click on "Virtual Class Meetings (Link)" for the specific date of our class
5. Click "join"
6. You're in our live class session (but only if I contract COVID-19)!

Class Format:

This course will be a mixture of lectures and discussions, in-class tasks, and readings. *Please complete all assigned readings and tasks before coming to class each day!* The tentative topics and

reading assignments for each class are provided on the following pages. We may deviate from this tentative schedule, so the dates and topics are intended as rough guides for where we will be throughout the semester.

Writing Assignment and ‘Hands-On’ Writing Exercises:

A writing assignment has been incorporated into the course (described below). Learning to write clearly is a skill that should benefit you in almost every profession or professional pursuit. Thus I have also incorporated into the course two in-class, hands-on, fun writing exercises that will help you practice several easy-to-adopt tips for writing clearly.

Class Participation and Attendance (5% of course grade)

Attending our weekly classes is required and critical for you to master and enjoy the course material; thus please make every effort to attend (on time) our class meetings. Class attendance has been shown to improve grades and graduation success. So don't skip-out on class...for lots of reasons!

Quizzes (30% of course grade):

Five quizzes will be administered during the semester. The quizzes will be based on reading assignments and material discussed in class. I will drop your lowest quiz grade when computing your final course grade. Thus each of your four highest quiz grades will contribute 7.5% to your final course grade.

Examinations (40% of course grade):

Two exams will be administered during the semester. The tentative exam dates are provided on the next pages. **The exam dates are tentative, so please do not plan business trips or other obligations around the latter dates.** Each exam contributes 20% to your course grade. Exams will be a combination of essay, short answer, and multiple-choice questions. If you miss one exam then you will be permitted to take a comprehensive make-up exam during the final exam time slot scheduled by UTEP (May 11th 2022 at 4 p.m.).

Mini-Term Paper (20%):

Students will be required to write a 4-5 page paper (see attached Mini-Term Paper Assignment Instructions). Papers must be typed and double-spaced. The paper contributes 20% to your course grade. **The paper is due by 11:59 p.m. on Wednesday April 13th 2022.** Note that we will meet on Monday May 2nd to review your papers and discuss easy-to-adopt strategies for improving your writing. The latter 'writing session' should help you succeed in many courses and professional pursuits. Submitting your papers by April 13th will give me sufficient time to read and comment on each paper by May 2nd, when we will review writing issues associated with your papers. Thus please **DO NOT** ask for a deadline extension. I will not give extensions unless you are hospitalized or subject to some other extreme emergency. *Late papers will have their grades lowered by one letter grade (e.g., an "A" paper become a "B" paper).* Papers should be carefully crafted and clearly written. Unclear writing often reflects unclear thinking. To help you develop your

professional writing skills, we will spend part of two class sessions during this semester reviewing writing tips and completing hands-on writing exercises that should improve your professional writing skills. You must submit two drafts of your paper along with your final ‘paper’, so please save your drafts!

In-Class Projects (5% of course grade):

Throughout the course I will ask you to develop research designs that test a variety of hypotheses related to human behavior. These projects will usually be completed in-class. These small projects are usually quite fun to work on, and the tasks are a bit like solving puzzles. We will work together to help solve each puzzle (that is, design a specific research study to help answer an interesting practical question). These puzzles and tasks will sometimes be completed in class but some tasks may require briefly working together outside of class (either via Zoom or phone or other means of communication (excluding mental telepathy!)).

Extra Credit (Optional)

You can earn an extra credit by participating in four (4) hours of research conducted in the Psychology Department. Your participation will help you learn more about the research techniques and procedures that are used in behavioral science research. Three (3) percentage points will be added to one exam score for each hour of participation (maximum research credit: 12-percentage points). Three points will be deducted from an exam score for each hour of research that you sign-up to participate in but fail to attend without notifying the experimenter sufficiently in advance. All research credits must be completed by Dead Day, May 6th 2022.

The attached sheet (“PSYC SONA Participant Policy Spring 2022”) provides instructions for identifying and signing-up for studies that are conducted in the Psychology Department this semester. **If you are unable to participate in these research studies but still want to earn extra credit then you can write four (4) short research papers (each paper should be 2-pages in length, typed) based on research articles that I have selected for you.** Each 2-page paper should briefly summarize the research question that was addressed in the article, the research methods that were employed in the study, and the main findings. Please write your name, student ID number, and course number (PSYC 3340) at the top of each paper that you submit. Each research paper requires about one hour of work. Three (3) percentage points will be added to one exam score for each paper submitted (maximum research credit: 12-percentage points). **Please contact our Teaching Assistant if you want copies of the research articles.** Request for articles must be made by Wednesday May 4th 2022. Your 2-page papers summarizing each article that you request must be submitted to our Teaching Assistant by Dead Day (Friday May 6th 2022).

Note: Students who complete 3 of their required credit hours by March 11th will be given an additional credit hour. This means that students can get credit for completing four hours of research by only completing 3 hours of research studies, as long as they complete 3 hours of research credit by the March 11th deadline.

Strategies for Success in this Course

1. You can increase your likelihood of success in the course by identifying a ‘backup-buddy’; that is, someone who you can contact via email or phone to get the class notes for any day that you miss class due to illness. The ‘backup-buddy’ strategy has been useful to students in past semesters. **Each student in the class should identify a ‘backup buddy’ by the end of the 2nd week of classes.**

2. Many talented students stumble in Research Methods because they do not invest the time needed to succeed in the course. Remember this rule of thumb: For every three (3) credit hour course that you take during a regular (fall or spring) semester, you should spend 3 hours attending class each week and 7.5 hours studying outside of class! **Thus you should plan to devote approximately 10.5 hours each week to mastering the material in this course.** I have designed the course, the readings, and the assignments with the latter time commitment in mind.

3. You should read all of the assigned material, and you should read the material more than once. Most importantly, interact with the material!! Write comments in the margins of the chapters and articles, type up your notes, discuss the material with friends (or even enemies), or just close the door to your room and review the material aloud! Actively engaging material is absolutely critical for your success in any course. Passively reading a chapter or article just once is useless. At the university level, you are expected to master material in a non-trivial way. Hence the need to genuinely commit the type of time and energy described above in order to get the payoff that you desire. The material that we will read and review this ‘semester’ is very exciting and has numerous practical implications. So please make sure that you give yourself sufficient time to read and digest the material.

A NOTE REGARDING ACADEMIC HONESTY, INTEGRITY, AND DISHONESTY

Please make sure that you are the sole author of your ‘term paper’. Do not plagiarize or ask a friend or company to write your paper. To help you avoid plagiarism I have attached two brief documents handouts from UTEP’s Office of Student Conduct and Conflict Resolution that describe plagiarism and how to avoid it. In addition, when discussing research findings please use your own words. Do not cut and paste a montage of quotes from the authors themselves! Your task is to express the ideas in your own words.

Academic integrity and academic honesty are highly valued at UTEP. The Office of Student Conduct and Conflict Resolution (<http://sa.utep.edu/osccr/academic-integrity/>) notes the following: “...students are expected to maintain absolute integrity and a high standard of individual honor in scholastic work undertaken at the University. At a minimum, you should complete any assignments, exams, and other scholastic endeavors with the utmost honesty...”

“Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes, but not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable to another person.

“Cheating: Copying from the test paper of another student; communicating with another student during a test; giving or seeking aid from another student during a test; possession and/or use of unauthorized materials during tests (i.e. Crib notes, class notes, books, etc.); substituting for another person to take a test; falsifying research data, reports, academic work offered for credit.

“Plagiarism: Using someone’s work in your assignments without the proper citations; submitting the same paper or assignment from a different course, without direct permission of instructors

“Collusion: Unauthorized collaboration with another person in preparing academic assignments

TENTATIVE SCHEDULE

NOTE 1: Do not fall behind in your readings or your class attendance. If you have questions about the readings or class material then please come see me during office hours- **I enjoy meeting with students!!**

NOTE 2: April 1 2021 is spring 2022 Drop/Withdrawal Deadline. Student-initiated drops are permitted after this date, but the student is not guaranteed a grade of W. The faculty member of record will issue a grade of either W or F.

<i>Date</i>	<i>Topic</i>	<i>Reading Assignment (complete before class)</i>
<i>Jan. 19</i>	<i>Introduction & Fundamental Issues in Research Methods</i>	<i>Chapter 1 in Morling</i>
<i>Jan. 24 & 26</i>	<i>Fundamental Issues (con’t) & In-Class Aphorism Task</i>	<i>Chapter 2 in Morling</i>
<i>Jan. 31</i>	<i>Simple Experiments I</i>	<i>Chapter 10 in Morling (pp. 273-286)</i>
<i>Feb 2</i>	<i>Testing the Validity of Dowsing: Videos & In-Class Research Designs</i>	
<i>Feb. 7</i>	<i>Puzzle: Clever Hans In-class Research Design</i>	<i>Rosenthal: Clever Hans (pdf chapter)</i>
<i>Feb. 9</i>	<i>Quiz #1 (all material thus far)</i>	
	<i>Puzzle: Facilitated Communication Videos & In-class Research</i>	<i>Chapter 3 in Morling</i>

Designs

Feb. 14 & 16	Ethical Issues in Research; Tuskegee, Milgram, and the Belmont Report	Chapter 4 in Morling
Feb. 16	Submit Mini-Term Paper Topic for discussion and approval	
Feb. 21	Exam #1: All Material Assigned thus far	
Feb. 23 & Feb. 28	Interesting Measurement Issues in Research	Chapter 5 in Morling
Feb. 28	Finalize Mini-Term Paper Topic	
March 2	In-class Writing Task: (‘Finding Waldo in a Crowd of Sentences’)	No reading
March 7	Puzzles in Survey Research	Chapter 6 in Morling
March 9	Quiz #2 (all material since Exam #1) New Topic: Intelligent Design (Introduction)	
March 14 & 16	SPRING BREAK: NO CLASS	
March 21	Is the ‘theory’ of Intelligent Design a scientific theory? And who cares! Magic, Uri Geller, and Psychic Ability: Videos & In-class Research Designs	Legal opinion of Judge Jones (selected pages) “Introduction” Popular Myths in Psychology Lilienfeld et al. (2010)

March 23	Research Samples & Research Populations	Chapter 7 in Morling
March 28 & 30	Correlation, Causation, & Other Tricky Issues	Chapter 8 in Morling
[April 1	Spring Drop/Withdrawal Deadline "Student-initiated drops are permitted after this date, but the student is not guaranteed a grade of W. The faculty member of record will issue a grade of either W or F."]	
April 4	Quiz #3 (all material since last quiz, including writing exercises) Correlation & Causation (con't)	
April 6	"Simple Experiments II"	Chapter 10 in Morling
April 11	Those darn 'confounding' variables!	Chapter 11 in Morling
April 13	Quiz #4 (all material since last quiz) Mini-Term Papers due by 11:59 p.m.!!! Confounding Variables (Con't)	
April 18 & 20	Quasi-experiments (they're all around you!)	Chapter 13 in Morling
April 25 & 27	What is the 'replication crisis' and am I in danger?!	Chapter 14 in Morling
May 2	Quiz #5 (all material since last quiz) 2 nd hands-on in-class writing task: Finding Waldo in your own term papers	

May 4

Exam #2

(all material assigned & discussed this semester)

May 11
4 p.m.

Comprehensive Make-Up Exam

(only for students who missed a prior exam)