

Experimental Psychology (or similar)

Department of _____. _____ University.
Syllabus (Psy 301) Fall, 2025.

Course credits: 3 plus 1 credit laboratory

Prerequisites PSY 101 AND MAT 261

Professor _____

Textbook Information:

Moss, A. J., Robinson, J., & Litman, L. (2025). *Research in the Cloud: An Introduction to Modern Methods in Behavioral Science*. Cambridge University Press.

Free Textbook Link: https://bit.ly/RITC_Preview

OSF Link to Materials: <https://osf.io/a8kev/>

Course Description

Welcome to Experimental Psychology! This hands-on, project-based course introduces you to the methods psychologists use to study behavior and mental processes through a Classroom-Laboratory (CLAB) model. Each session combines lecture and applied activities, giving you the chance to learn about behavioral research methods and immediately put them into practice by working with real data.

We will explore descriptive, correlational, and experimental designs, learning when and how to apply each one. Along the way, you will replicate classic findings, design and launch your own studies. You will also build practical skills with research tools, including Google Sheets, Qualtrics for survey design, SPSS for data analysis, and AI-assisted platforms to enhance study design and interpretation.

By the end of the course, you will not only know how to conduct rigorous psychological research, but also how to evaluate it critically, communicate findings in APA style, and collaborate effectively as part of a research team. Let's get started!!

Course Learning Goals

1. Think like a scientist by applying the logic of psychological science to *generate hypotheses, design studies, and interpret findings*.
2. *Design and conduct* behavioral research using a range of methods (descriptive, correlational, experimental) and appropriate measurement tools.
3. *Use research technologies effectively* by employing software platforms (e.g. Excel, Google Sheets, Qualtrics (Engage), SPSS, JASP) and AI-assisted tools to design studies, collect data, and enhance analytic and methodological decision-making.
4. *Analyze and interpret data using statistical software* to evaluate evidence, assess reliability and validity, and draw accurate conclusions.
5. *Communicate scientific findings* effectively through APA-style writing, data visualizations, and oral presentations.
6. *Collaborate professionally* by engaging in group research projects that require teamwork, project management, and shared responsibility.

Student Learning Outcomes

- Generate testable hypotheses from psychological theories and empirical findings.
- Design and implement studies using descriptive, correlational, and experimental methods.
- Employ research technologies to collect, manage, and analyze behavioral data.
- Apply statistical techniques (e.g., descriptive statistics, correlations, t-tests, chi-square, regression/ANCOVA) to evaluate research questions.
- Interpret and critique findings with attention to validity, reliability, third-variable control, and ethical standards.
- Communicate research findings effectively through APA-style reports, oral presentations, and visual displays of data.
- Collaborate effectively in research teams.

Grading




Grading Breakdown	
Portfolio Entries	55%
Midterm Exam	15%
Final Exam	15%
Final Poster Presentation	15%







Portfolio Entries: Throughout the class you will be keeping a running portfolio of your work. You will submit individual portfolio entries on Canvas while keeping a larger document as a shareable Google document.











Final Project: This includes grades for each element of the project including, Brainstorming, Annotated Bibliography, Introduction, Methods, Results and Discussion.

Poster Presentation: This is a group presentation in which each member of the group receives the same grade. You will create a conference style poster and present your project to the class.

Academic Integrity: Please see link below for [Institution's] full statement on academic integrity which includes AI usage. Below is an excerpt.

Class Schedule <i>*Please note this is updated regularly and subject to change*</i>		
Date	Class Content	Assignments/Projects Due
9/3	Welcome and Introduction! Module 1.1 - Research Activity, TIPI, Intro to your Portfolio	 Portfolio Entry 1 - TIPI TIPI-Data
9/8	Module 1.2 - Scientific Theories Module 1.3 - Behavioral Science in the real world Module 1.4 - Thinking Critically about Cause and Effect	
9/10	Module 2.1 - Finding Participants What's it like being a research participant? Setting up your Connect account.	Connect Participant Account Connect Researcher Account  Portfolio Entry 2 - Reporting on your participant Experience
9/15	Module 2.2 - Conducting Literature Reviews Module 2.3 - Tools for Creating Studies - Qualtrics - setting up Qualtrics Accounts	 Entry 3 - Using Google Scholar
9/17	Module 2.4 - Tools for Analyzing Data - SPSS Module 2.5 - Tools for Sharing Research Module 3.1- Basics of Measurement Module 3.2 - The Power of Description	
9/29	Module 3.3 - Designing a Descriptive Study Introduction to the Heinz Dilemma and Using Qualtrics	
10/10-15		
10/20	Module 3.4 - The Heinz Dilemma -Analyzing Descriptive Data, an Introduction to SPSS Module 3.5 - Conducting Your Own Study! Brainstorming and Programming. Study Launch!	

10/22	Analyze your Data! Module 4.1 - Measurement Scales	 Entry 4 - Reporting on your Data Analysis
10/27	Module 4.2 - Finding and Creating Measurement Scales Finding existing measurement scales and creating your own using AI	 Entry 5 - Designing measurement scales
10/29	Module 4.2 - Wrap up if necessary Module 4.3 - Reliability and Validity Module 4.4 - Scales of Measurement	
11/3	Module 5.1 - What do correlations tell us? Positive and Negative Correlations Calculating Correlations Using and Reporting Correlations	 Entry 6 - using and reporting correlations
11/5	Module 5.2 - Different Types of Associations Continuous vs. Categorical Data Calculating, Using and Reporting T-tests and Chi-Squares	 Entry 7 - Using and reporting t-tests and Chi-Squares
11/10	Module 5.3 - Guided Correlational Research Project, Morality and the Heinz Dilemma <ul style="list-style-type: none"> • Develop Hypotheses • Access Study Materials • Begin Data Analysis <p>Exam 1</p>	EXAM 1 - Chapters 1-4
11/17	Module 5.3 - Continue Guided Research Project. Complete Data Analysis and Write Up	 Entry 8 - Guided Research Project, Methods and Results
11/19	Module 5.4 - Designing your own research Project. Group Project #1 Form Groups Brainstorming and Hypotheses Generating Collect Measures Begin Survey Building	 Entry 9 - Progress reports on Group Project. Begin working on Methods section
11/24	Module 5.4 - Group Project Continued Complete Survey and Collect Data Analyze Data if Possible	

11/26	Analyze Data and Complete Projects	 Entry 10 - Results and write up for Project 1
12/1	Wrap up Projects if needed Chapter 6 - Issues with Correlations and how to control for them Module 6.1 - Controlling for Third Variables	 Entry 11 - ANCOVAs and Regression
12/3	Wrap up Module 6.1 Module 6.2 - The directionality of Cause and Effect	
12/8	Module 7.1 -How Experiments Establish Causality Module 7.2 - Guided Project - Perspective taking	 Entry 12- Perspective Taking
12/10	Module 7.2 - Finish Analyses Module 7.4 - Factorial Designs	 Entry 13 - Factorial Designs
12/15	Module 7.3 - Repeated Measures Form Project Groups Brainstorming Literature Review Generate Hypotheses	 Brainstorming, Hypotheses
12/17	Finalize Hypotheses Collect Measures Begin Programming Studies	 Initial Bibliography, Measures, Outline of Methods Section
12/22	Finish Programming if Needed Launch Studies	 Methods Section Due Bibliography Due
12/24	Analyze Data	 Annotated Bibliography Due
12/29	Analyze Data	 Introduction Due
12/31	Complete Data Analysis if necessary	 Results Section Due

TBD	Group Presentations and Individual Final Paper Due	Final Paper and Power Point Presentations Due
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