PSY 3213L Laboratory Methods in Psychology
Spring 2026

Professor:
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Office: PSY 311J

Office Hours:
Thursday: 2:00 PM – 3:00 PM
Friday: 10:30 AM – 11:30 AM
or by appointment

Class Time and Location:
Tuesday (T) 11:45 AM – 1:40 PM
Thursday (R) 12:50 PM – 1:40 PM
Location: Florida Gym 0260

Teaching Assistants:
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Course Description: Research design and data analysis are some of the most important skills scientists ought to develop; these skills are also highly sought by companies and organizations and are overall crucial tools for people to differentiate between credible and untrustworthy information. The purpose of this course is to teach you the basic principles of psychological science, from the pillars of theory and research design, to learning to pick and conduct tests statistical tests of hypotheses and visualize your results. In addition, this course will teach you the R, an open-source program to conduct statistical analyses and data visualization. No prior experience with coding is necessary to excel in this course. Success in this course requires active participation in class activities, timely reading of assigned material, and review of all material on a regular basis outside of the class.

Learning Objectives:
Upon completion of this course, students will:

1. Understand each component of the research process
2. Be able to identify threats to the validity of research inferences
3. Be knowledgeable of different research designs, their best practices and the strengths and limitations of each design.
4. Effectively select and conduct adequate analyses depending on the type of data available and research design.
5. Understand the characteristics and underlying assumptions of different statistical tests.
6. Effectively visualize data patterns and personalize data visualization code.

7. Know how to read and report statistical results.

Required Text:

Cozby, P. C. & Bates, S. C. (2024). *Methods in Behavioral Research* (15th ed.). New York, NY.

> *This course is participating in the UF ALL ACCESS program for the Spring 2026 semester.* ***The ALL ACCESS program will allow you to gain access to the required materials for the course at a significantly discounted price.*** ***Please see UF All Access PDF posted in in the course files for directions on how to opt-in and access your course materials. Go to UF ALL ACCESS to log into your GatorLink account. You will see a list of classes in which you are enrolled that are participating in UF All Access, with the prices. Click the Opt-in check box next to the appropriate class. You may have more than one class that you are taking participating in the program. Students then need to click the button below to authorize the charges.*

All other reading and learning materials will be freely available on Canvas either as PDFs or accessible links.

You will need to bring your personal laptop to lab sections. You will be required to install certain computer programs, so you must have administrator permissions in your laptop. If this is not possible, please email me and we can work on an alternative solution.

Canvas

Course-related materials will be posted on Canvas platform (http://lss.at.ufl.edu; click "**Canvas Login**") so if you are not familiar with it, I highly suggest that you spend some time exploring its various components. Each student must become familiar with this software and check the course web site on a regular basis because important class updates and announcements will be posted online. You will be responsible for all class announcements made through canvas.

Grading

Graded content	Total Points	Percent of Final Grade
Quizzes (Total 3)	90	29 %
In-Class Assignments (Total 8)	80	25 %
SONA Participation	10	3 %
Homework Assignments (Total 5)	15	5 %
Research Project	120	38%
Proposal	25	8 %
Abstract	25	8 %
Final Submission	60	19 %
Group Member Grades	10	3 %
Extra Credit (Optional)	+5	+ ~1.5 %
Total:	315	100

For reference, your final grade percentage will be converted into a letter grade following the grading scale below. Raw scores will be rounded up using conventional rounding rules.

		B+	= 87 – 89%	C+	= 77 – 79%	D+	= 67 – 69%	E	= 0 –59%
A	= 93 – 100%	B	= 83 – 86%	C	= 73 – 76%	D	= 63 – 66%		
A–	= 90 – 92%	B–	= 80 – 82%	C–	= 70 – 72%	D–	= 60 – 62%		

Quizzes

There will be 3 non-cumulative quizzes (see course schedule). Each quiz is worth 30 points and will consist of multiple-choice questions. On the day of the quiz, please arrive on time. If you arrive after the first person has turned in their quiz, you will not be allowed to take the quiz that day and will need to schedule a make-up quiz, which will consist of an **essay** (rather than multiple-choice) exam. In the case of emergency or a UF-approved absence (see here) and adequate documentation, students may request to arrange a different date and time to take the original multiple-choice quiz. This make up quiz will be scheduled as soon as practicable, if possible, *within one week* of the excused absence.

In-Class Assignments

The lab sections will be dedicated to applying the content of lectures and making progress toward the final assignment. Most lab sessions will be conducted on Tuesdays but see Course Schedule for exceptions. The labs will be structured as workshops, where I give you the tools to complete the in-class assignments. These in-class assignments will be key to your learning of R and make up a big portion of your final grade, so class attendance is crucial. Working completely independently on these assignments is *not* necessary. Many in-class assignments will give you the chance to conduct the data analysis necessary for your final project. Thus, students may work on in-class assignments in groups and request help during the workshop as needed.

There are two types of in-class assignments:
Individual assignments (2): require unique responses from each student.
Group assignments (6): submissions will be unique to the group rather than individual student. However, each student is responsible for submitting their work on Canvas. Students in the same group will submit the same document, to which all group members are expected to have contributed equally.

Each in-class assignment is graded on a 0 (not submitted) to 10 (excellent) scale. The specifics of each in-class assignment will be revealed during class. Students must submit their individual assignments via Canvas before the end of the class period. Unless instructed otherwise, in-class assignments will be submitted as .docx documents that include captures of the code, output and their interpretation.

Homework Assignments

There are 5 short homework assignments in this course. Most homework assignments are focused on ensuring that you are prepared to complete in-class assignments during lab sessions.

As such, each homework assignment will be graded on the basis of whether it is completed (3 points) or missing (0 points). Most homework assignments will be due before the beginning of class on Tuesday but see below in Class Schedule for exception. Late assignments will *not* be accepted without documentation of a UF-approved absence.

Research Project

Students will be responsible for working in groups of 3-4 on a semester-long research project. All projects will use publicly available datasets from the American National Election Survey (ANES) or the World Values Survey (WVS). Students may choose one of 5 research tracks given their personal interests:

1. Pre-Post Election Changes in psychological or behavioral data (ANES)
2. Gender differences in psychological or behavioral data (ANES, WVS)
3. Media consumption and age effects (ANES, WVS)
4. Effects of Religion and Values on Political Ideology (ANES, WVS)
5. Financial and Mental Well-being (WVS, ANES)

The research project is comprised of four graded components:

- ***Proposal:*** Students will submit a short project proposal for the study they will conduct. This proposal will include a short review of relevant literature and hypotheses (500 words approximately), an overview of the methods which includes data source, variables selected and a data analysis plan (500 words max), and APA-formatted references (minimum 5 references).
- ***Abstract:*** Students will submit a short academic summary of the project (max 250 words). The abstract will include an overview of the research question, methods and results. The submission will also include a project title (max 15 words), and authors.
- ***Final Submission:*** The final submission of the project will take the form of an academic poster in PowerPoint (size: 48' x 36'). Examples of academic posters will be provided through the course Canvas site. The poster should include the following sections: (a) Background/Introduction, (b) Methods, (c) Results including tables and graphs, and (d) Discussion/Future Directions.
- ***Group Member Grades:*** Group members will grade each other in their contributions to the project. This aspect of the grade is intended to keep each group member accountable to the project, while not being a substantial portion of students' final grades. Group members will provide two ratings for each group member, one after the proposal has been submitted, and a second one after the final submission.

Extra Credit Option

Students may write a short reflection (max. 500 words) about the limitations of their group project and future potential directions the student may want to pursue to test their research question (or similar others). The reflection should address the types of studies needed to properly test the original research question or new, follow-up research questions. The reflection will be

graded in terms of depth and writing clarity. Further details about the extra credit option are be posted on the course Canvas website.

SONA Participation Pool

Learning about Psychology requires reading, listening, and doing. As a supplement to lecture, you are required to participate in 7.5 hours of experimental research studies, or to complete an equivalent alternate assignment (see assignment on Canvas for more details). There is a Psychology Department requirement that all students enrolled in Gen Psych, Personal Growth, or any 3000-level class participate in the SONA participation pool. Please see the Canvas assignment for very detailed instructions about this assignment. There is also a file uploaded to Canvas called "SONA Participation Pool". The deadlines for this requirement will be posted on the research requirement document by the second week of class. Completion of this requirement affects your course grade based on the amount of research credits you earn. Do NOT wait until the last minute to complete this requirement. The longer you wait the harder it will be to get all the credits need! When you complete the research experience, you will receive 15 points that are added into your final grade. If you do NOT complete the full number of credits by the deadline, you will receive points at a rate of 1 point per credit completed. If you do not wish to participate in research then you may "opt in" for an alternative assignment, please see the Canvas assignment for more details.

Class Schedule

Date	Topic	Assignment
(T) Jan 13	**Lab:** Course overview + Installing R and R Studio	**Homework 1:** Submit evidence of R and R studio installation. See instructions and submission details in course Canvas site. **** Due Jan 13 at 11:59 PM ****
(R) Jan 15	**Lecture:** Basics of Scientific Research I	Read Cozby & Bates (2024) Chapter 1
(T) Jan 20	**Lab:** Conducting a literature search in psychological databases + APA Style Rules	**In-Class Assignment 1 (individual):** Literature Search **** Due Jan 20 at 1:40 PM ****
(R) Jan 22	**Lecture:** Basics of Scientific Research II	Read Cozby & Bates (2024) Chapter 2
(T) Jan 27	**Lab:** Navigating R Studio: Packages, Libraries, Functions and Objects	**In-Class Assignment 2 (individual):** Your first script **** Due Jan 27 at 1:40 PM ****
(R) Jan 29	**Lecture:** Ethics	Read Cozby & Bates (2024) Chapter 3

		Homework 2: Complete CITI training. See instructions and submission details in course Canvas site. **** Due Jan 29 at 11:30 AM ****
(T) Feb 3	**Lecture:** Fundamentals of Research I	Read Cozby & Bates (2024) Chapter 4
(R) Feb 5	**Quiz 1 (Chapters 1, 2 & 3)**	
		Homework 3: Complete survey about Research Track. Survey link posted in course Canvas site **** Due Feb 5 at 11:30 AM ****
(T) Feb 10	**Lab:** Drafting a research project	**In-Class Assignment 3 (group):** Selecting datasets and variables **** Due Feb 10 at 1:40 PM ****
(R) Feb 12	**Lecture:** Fundamental Research Issues II	
(T) Feb 17	**Lecture:** Measurement Concepts	Read Cozby & Bates (2024) Chapter 5
(R) Feb 19	**Lecture:** Descriptives and Correlational	Read Cozby & Bates (2024) Chapter 12
(T) Feb 24 (R) Feb 26	No Class - SPSP ** work on group proposal **	
(T) Mar 3	**Lab:** Describing our samples	**In-Class assignment 4 (group):** Demographics Table, basic correlations, **** Due Mar 3 at 1:40 PM ****
		Group Project Proposal **** Due Mar 3 at 11:59 PM ****
		Homework 4: Group Member Grades I via Survey Link posted on course Canvas **** Due Mar 2 at 11:59 PM ****
(R) Mar 5	**Quiz 2 (Chapters 4, 5 & 12)**	
(T) Mar 10	**Lab:** Statistical Inference + Correlations Workshop	Read Cozby & Bates (2024) Chapter 13 **In-Class Assignment 5 (group):** Correlations Table + Graph

		**** Due Mar 10 at 1:40 PM ****
(R) Mar 12	**Lecture:** Survey Research	Read Cozby & Bates (2024) Chapter 7
(T) Mar17 (R) Mar 19	Spring Break	
(T) Mar 24	**Lab:** Multivariate regressions, moderations and simple slopes	**In-Class Assignment 6 (group):** Testing effects of Continuous Predictors **** Due Mar 24 at 1:40 PM ****
(R) Mar 26	**Lecture:** Experimental Designs	Read Cozby & Bates (2024) Chapter 8
(T) Mar 31	**Lab:** T-tests, one-way ANOVAs	**In-Class Assignment 7 (group):** Testing effects of Categorical predictors I **** Due Mar 31 at 1:40 PM ****
(R) Apr 2	**Lecture:** Complex Experimental Designs	Read Cozby & Bates (2024) Chapter 10
(T) Apr 7	**Lab:** Two-way ANOVAs, ANCOVAs and Repeated Measures ANOVAs	**In-Class Assignment 8 (group):** Testing effects of Categorical predictors II **** Due April 7 at 1:40 PM ****
(R) Apr 9	**Quiz 3 (Chapters 13, 7, 8, 10)**	
(T) Apr 14	**Lab:** Abstract and Poster workshop	**Group Project Abstract** ****Due April 14 at 11:59 PM ****
		Extra Credit ****Due April 14 at 11:59 PM ****
(R) Apr 16	**Lab:** In-lab group work	
(T) Apr 21	**Lab:** In-lab group work	
(R) Apr 23	NO CLASS	**Final Assignment** **** Due April 23 at 11:59 PM ****
		Homework 5: Group Member Grades II via Survey Link posted on course Canvas ****Due April 23 at 11:59 PM ****

Teaching Philosophy

My teaching is grounded in the understanding that learning – in particular in STEM subjects – can be an uncomfortable and anxiety-provoking experience. My hope is to create a learning

environment that makes students comfortable and excited to pursue their creativity and curiosity unburdened by math and STEM anxiety. The course is designed to introduce students to research methods and data science tools that will allow them to pursue their own interests in psychology or related fields. I appreciate constructive and continuous feedback from students on how to improve the course. At the same time, I expect students to be open to constructive criticism on their projects and ready to actively participate with course material.

Course Policies

Attendance Policy
Successful completion of this course requires regular class attendance and active participation in class. If you miss a class, you are responsible for obtaining the information discussed in class from your classmates. I also encourage you to come to office hours with questions, especially if you miss class.

Please do not come to class if you are feeling sick. Class attendance is important, but your health and the wellbeing of others in the classroom is more important. The course provides plenty of opportunities to make up for missed classes for excused absences, so there is no need to burden yourself and put others at risk. If you are feeling sick before class or otherwise incapable of attending, please email me as soon as possible. Follow this link to see what other situations are considered an excused absence: https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/

Late Work and Extensions

Late Work Penalties: Late in-class assignments will be accepted for up to 2 days after the due date with a penalty of 10% of your grade *for each day* it is late. The canvas submission portal will be closed after the due date. Late assignments must be emailed directly to me to be considered.

Extensions: I am amenable to providing extensions to students. All students have 1 extension request at their disposal. For group submissions, this policy translates into 1 extension per group. The extensions will grant you 1 additional week to complete the assignment. Extensions are not automatically applied and need to be requested via email *before* the assignment due date. Students do not need to provide a rationale if they do not wish to do so.

Grade Disputes
You will have 5 days from the day your grades are released to dispute them. After that, your grade will become final, and you will no longer be able to dispute it. Disputing your grade does not mean your grade will be changed. Disputes should be accompanied by a rationale for why and how you believe your grade should be changed (i.e., what aspects of the graded rubric do you disagree and why). Disputing grades should not be a default reaction to low grades and should only be pursued when one is confident that an error has occurred. To dispute your grade, you must email me and inform me you wish to dispute your grade.

Use of ChatGPT and other AI tools
I am of the belief that ChatGPT and other AI tools can be useful in specific cases and to certain extents. However, I expect my students to not rely on AI for brainstorming, synthesizing readings, finding sources, R code generation, interpreting results and writing. Reliance on AI has been shown to have serious effects on the environment, our cognitive abilities, and pose other serious ethical issues. While there is a big collective push to integrate artificial intelligence everywhere, this class is meant to give you the tools and knowledge to understand and conduct research yourself. The use AI would be a roadblock to your knowledge acquisition and skill development. If I suspect that students are using AI tools in critical components of their work, I will make note in their assignments. If this suspicion persists, I may ask students to demonstrate their knowledge of the topic or coding skills with supervision during office hours.

Classroom Conduct
Laptops: As indicated above, a laptop is a required component for this course. However, please keep in mind that you should only use your laptops for class-related work.
Disruptive Behavior: Disruptive behavior will not be tolerated. Please make sure to arrive to class on time. If you must leave the classroom for any reason, please do so quietly. Cell phones and other potential distractors must be turned off or be in silent mode. In the case that you have a personal emergency and need to have continuous access to your cell phone, please let me know in advance as courtesy.

University of Florida Academic Policies and Resources

This course complies with all UF academic policies.
For information on those polices and for resources for students, please see this link.

University Policy on Accommodating Students with Disabilities
Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting https://disability.ufl.edu/students/get-started/. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

Course Evaluations
I highly value your perspective on my teaching style and materials, and your ideas on how I could improve this course in the future. At the end of the semester, you will have the chance to formally and anonymously provide this feedback via GatorEvals. This feedback is not only important to me personally and for the development of the course but will also be used to evaluate my teaching by current and future employers. This does not mean the feedback has to be positive and praising, but please make sure the feedback you do provide is professional, respectful and constructive. University of Florida provides guidance on how to give feedback in a professional and respectful manner here: https://gatorevals.aa.ufl.edu/students/

Students will be notified when the evaluation period opens and can complete evaluations through the email their receive from GatorEvals or through the "GatorEvals" tab in Canvas course.

U Matter, We Care
Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

University Policy on Academic Misconduct
The University of Florida holds its students to the highest standards, and we encourage students to read the University of Florida Student Honor Code and Student Conduct Code (Regulation 4.040), so they are aware of our standards. Any violation of the Student Honor Code will result in a referral the Student Conduct and Conflict Resolution and may result in academic sanctions and further student conduct action (Please see above sections for the sanctions you will receive in this class for conduct violations). The two greatest threats to the academic integrity of the University of Florida are cheating and plagiarism. Students should be aware of their faculty's policy on collaboration, should understand how to properly cite sources, and should not give nor receive an improper academic advantage in any manner through any medium. UF Student Honor Code.