PSY3091-1 FA25 - Research Methods And Statistics II

Jump to Today ✎ Edit

Psychology Department

PSY 3091-1 Research Methods and Statistics II (4 units)

Fall 2025

Instructor:	Alexandra N. Bitter, Ph.D.
Email:	**abitter@pointloma.edu (mailto:abitter@pointloma.edu)**
Office Phone:	(619) 849-3054
Office:	Culbertson Hall 104 (Downstairs)
Office hours (Ask Me Anything):	**Click here to book an appointment! (https://calendar.app.google/mxa7sXvAcjm2v2XA7)** You must schedule an appointment 12 hours before or the system will prevent you from scheduling. If the available times don't work for you, shoot me an email and we can find something that works for both of us :)
Teaching Assistant:	Olivia Banuelos
Email:	obanuelo0023@pointloma.edu (mailto:obanuelo0023@pointloma.edu)
Class Location:	Ryan Learning 102
Class Meetings:	M/W/F; 8:30AM - 9:35AM
Department:	Psychology
Units:	4

Final presentations:	Wednesday, December 17th 8:30 - 10:00 AM Location: Taylor Courtyard

PLNU Mission

To Teach ~ To Shape ~ To Send

Point Loma Nazarene University exists to provide higher education in a vital Christian community where minds are engaged and challenged, character is modeled and formed, and service becomes an expression of faith. Being of Wesleyan heritage, we aspire to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

COURSE DESCRIPTION

At its core, psychology is a discipline that relies on insights from empirical research. The focus of this course is to train you to produce these insights and to contribute to the scientific understanding of human nature. In so doing, we will focus on developing important skills that will improve your ability to read and understand existing research, develop your own research questions, construct and test hypotheses, analyze data, and communicate research findings to both lay and professional audiences. The skills you learn along the way will improve your scholarship, and they will also give you specialized tools that can be applied outside the classroom in the business world, non-profit sector, health care settings, service industry, and higher education. Classroom activities will focus on lecture, discussion, tutorials, and hands-on practice. You will be evaluated based on your engagement with the material, your knowledge of it, and your ability to apply it to real-world problems and situations. When all is said and done, it is my hope that you will find the material from this course to be useful, engaging, and an important part of psychological study, no matter what your interests and goals may be.

From the catalog: "Study of design and of research in psychology and the use of statistics. Practice in the integration of design and statistics is included. Students finish a significant research project. This course must be taken in the semester immediately following PSY 3090."

COURSE LEARNING OUTCOMES

Our most important and basic objectives are for students to...

- Build and maintain an effective teamwork environment
- Develop basic and applied research skills
- Increase personal interest in research
- Increase skill related to communicating science findings to a wide variety of audiences

What this means in practice is that students will be able to…

- Solve real-life, practical problems using psychological science and the scientific method.
- Understand and interpret statistical research findings that are presented in writing, in numerical form, or as tables or figures.
- Apply statistical concepts in clinical and non-clinical applications to optimize vocational performance. This includes being able to interpret clinical test scores, analyze business and financial performance, and empirically assess decision making outcomes.
- Critically evaluate research claims made by academics, business professionals, and media figures by formulating alternative hypotheses, generating alternative explanations, and designing follow-up and replication studies.
- Identify and remediate potential problems in empirical and non-empirical research. This includes recognition of incomplete literature reviews, design flaws, poorly formed hypotheses, ethics violations, incorrect statistical execution and inference, and unsupported conclusions.
- Write a research proposal and submit it to an institutional review board.
- Present the results of empirical research to professional and lay audiences using written, oral, and visual expression. This includes being able to write a research paper using APA style, construct a poster for a research conference, and present research in a brief oral presentation with visual aids.

COURSE CREDIT HOUR INFORMATION

In the interest of providing sufficient time to accomplish the stated Course Learning Outcomes, this class meets the PLNU credit hour policy for a four unit class delivered over 15 weeks. Specific details about how the class meets the credit hour requirement can be provided by the university or our accrediting bodies.

Grading:

Homework/In-Class Exercises	35%
Midterm	20%
Final Paper	15%
Final Presentation	15%
Professionalism	15%
	100%

ASSESSMENT AND GRADING

Of note, a majority of the assignments in this class will be completed and graded as a group. There are some systems in place to ensure group members are all contributing equally; however, if this does not occur and you feel as though you deserve a higher grade at the end of the semester, you can come talk to me and we can reassess.

Midterm

The midterm is a statistics practical. The exam will be written, and you will use a statistical program of your choice (JASP, SPSS, R) to input data, analyze data, and interpret the test results.

Professionalism

My hope is that the skills you learn in this class will translate to your aspirations, whatever they may be. This class is a low stakes environment for you to learn, practice, and hone your skills. One necessary skill is professionalism. Professionalism encompasses a host of components. In this class you will be expected to:

- Participate
- Be kind and respectful
- Be on task
- Be helpful
- Do your fair share when working with others

Feedback will help you to understand your own strengths and growth areas related to professionalism. Feedback will be received twice: in the middle of the semester (worth 6% of your grade) and at the end of the semester (worth 9% of your grade). Midterm feedback will not act as your final grade, only as a mid-semester check in, and will hopefully stimulate constructive conversation among group members. Everyone will provide feedback one more time at the end of the semester. This feedback will result in your final grades. These grades will be determined by both your classmates' observations as well as my own. Professionalism is numerically and objectively calculated based on survey responses. My own observations are considered equivalent to other students you have worked with, and survey responses are averaged across to produce a final grade. These averages are then transferred to the professionalism rubric. The most effective way to display commensurate (A+) professionalism is to communicate, delegate, listen, and be a nice human.

Grade Scale

A	B	C	D	F
A 93-100 A- 90-92.99	B+ 87-89.99 B 83-86.99 B- 80-82.99	C+ 77-79.99 C 73-76.99 C- 70-72.99	D+ 67-69.99 D 63-66.99 D- 60-62.99	F Less than 59

PLNU ATTENDANCE AND PARTICIPATION POLICY

Regular and punctual attendance at all class sessions is considered essential to optimum academic achievement. If the student is absent for more than 10 percent of class sessions, the faculty member will issue a written warning of de-enrollment. If the absences exceed 20 percent, the student may be de-enrolled without notice until the university withdrawal date or, after that date, receive an “F” grade.

LATE ASSIGNMENTS

Assignments

Each day an assignment is late reduces the original assignment ceiling by 5%, up to a maximum of 50% lost (e.g., one day = 95%, two days = 90%, ten days = 50%). After ten days, the assignment is no longer eligible for credit without an official excused absence. However, you can also request an assignment extension. You can either receive an automatic two day extension or request more time if necessary. If you're interested, complete the form **here (https://pointloma.co1.qualtrics.com/jfe/form/SV_0fuXXRNHUy39w34)**. You must complete the form 24 hours before the assignment deadline. Otherwise, the initial late assignment policy stands. Late work will be accepted until the last week of classes. Official excused absences are given by the Provost's Office. Please be aware that the official PLNU policy is that illnesses are not excused absences, even with a note from a health care provider.

Exams

If missed, you can makeup one exam (i.e., the midterm) for any reason. Makeups must be taken within one week of the original exam administration time, barring special circumstances. **Email me (mailto:abitter@pointloma.edu)** to schedule a time! It is possible that I will not be available for a makeup; however, the psychology department assistant or my TA can also administer your exams. All makeups will be short answer and may not have the same questions as the original exam.

FINAL EXAMINATION POLICY

Successful completion of this class requires taking the final examination on its scheduled day. The final examination schedule is posted on the Traditional Undergraduate Records: Final Exam Schedules site. If you find yourself scheduled for three (3) or more final examinations on the same day, you are authorized to contact each professor to arrange a different time for one of those exams. However, unless you have three (3) or more exams on the same day, no requests for alternative final examinations will be granted.

STATE AUTHORIZATION

State authorization is a formal determination by a state that Point Loma Nazarene University is approved to conduct activities regulated by that state. In certain states outside California, Point Loma Nazarene University is not authorized to enroll online (distance education) students. If a student moves to another state after admission to the program and/or enrollment in an online course, continuation within the program and/or course will depend on whether Point Loma Nazarene University is authorized to offer distance education courses in that state. It is the student's responsibility to notify the institution of any change in his or her physical location. Refer to the map on State Authorization to view which states allow distance education outside California.

PLNU COPYRIGHT POLICY

Point Loma Nazarene University, as a non-profit educational institution, is entitled by law to use materials protected by the US Copyright Act for classroom education. Any use of those materials outside the class may violate the law.

PLNU RECORDING NOTIFICATION

In order to enhance the learning experience, please be advised that this course may be recorded by the professor for educational purposes, and access to these recordings will be limited to enrolled students and authorized pe

Note that all recordings are subject to copyright protection. Any unauthorized distribution or publication of these recordings without written approval from the University (refer to the Dean) is strictly prohibited.

PLNU ACADEMIC HONESTY POLICY

Students should demonstrate academic honesty by doing original work and by giving appropriate credit to the ideas of others. Academic dishonesty is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the results of another person's creativity and effort. A faculty member who believes a situation involving academic dishonesty has been detected may assign a failing grade for that assignment or examination, or, depending on the seriousness of the offense, for the course. For all student appeals, faculty and students should follow the procedures outlined in the University Catalog. See Academic Policies for definitions of kinds of academic dishonesty and for further policy information.

ARTIFICIAL INTELLIGENCE (AI) POLICY

You are allowed to use Artificial Intelligence (AI) tools (e.g., ChatGPT, Gemini Pro 1.5, GrammarlyGo, Perplexity, etc.) in this course. Any work that utilizes AI-based tools must be clearly identified as such, including the specific tool(s) used. This means you must cite when using AI, following APA style for your citations. If you do not cite your sources, this is considered plagiarism. Additionally, solely copying AI-produced text without significant modification is also considered plagiarism. AI-generated text must be altered to incorporate your own voice, insights, and understanding. The first time a violation occurs, you will receive a warning; subsequent violations will result in a zero on the assignment. Importantly, all group members must be in unanimous agreement over the use of AI tools.

PLNU ACADEMIC ACCOMMODATIONS POLICY

PLNU is committed to providing equal opportunity for participation in all its programs, services, and activities in accordance with the Americans with Disabilities Act (ADA). Students with disabilities may request course-related accommodations by contacting the Educational Access Center (EAC), located in the Bond Academic Center (EAC@pointloma.edu or 619-849-2533). Once a student's eligibility for an accommodation has been determined, the EAC will work with the student to create an Accommodation Plan (AP) that outlines allowed accommodations. Professors are able to view a student's approved accommodations through Accommodate.

PLNU highly recommends that students speak with their professors during the first two weeks of each semester/term about the implementation of their AP in that particular course. Accommodations are not retroactive so clarifying with the professor at the outset is one of the best ways to promote positive academic outcomes.

Students who need accommodations for a disability should contact the EAC as early as possible (i.e., ideally before the beginning of the semester) to assure appropriate accommodations can be provided. It is the student's responsibility to make the first contact with the EAC. Students cannot assume that because they had accommodations in the past, their eligibility at PLNU is automatic. All determinations at PLNU must go through the EAC process. This is to protect the privacy of students with disabilities who may not want to disclose this information and are not asking for any accommodations.

LANGUAGE AND BELONGING

Point Loma Nazarene University faculty are committed to helping create a safe and hospitable learning environment for all students. As Christian scholars we are keenly aware of the power of language and believe in treating others with dignity. As such, it is important that our language be equitable, inclusive, and prejudice free. Inclusive/Bias-free language is the standard outlined by all major academic style guides, including MLA, APA, and Chicago, and it is the expected norm in university-level work. Good writing and speaking do not use unsubstantiated or irrelevant generalizations about personal qualities such as age, disability, economic class, ethnicity, marital status, parentage, political or religious beliefs, race, gender, sex, or sexual orientation. Inclusive language also avoids using stereotypes or terminology that demeans persons or groups based on age, disability, class, ethnicity, gender, race, language, or national origin. Respectful use of language is particularly important when referring to those outside of tthe religious and lifestyle commitments of those in the PLNU community. By working toward precision and clarity of language, we mark ourselves as serious and respectful scholars, and we model the Christ-like quality of hospitality. If you (or someone you know) have experienced other forms of discrimination, you can find more information on reporting and resources at www.pointloma.edu/nondiscrimination.

SEXUAL MISCONDUCT AND DISCRIMINATION

In support of a safe learning environment, if you (or someone you know) have experienced any form of sexual discrimination or misconduct, including sexual assault, dating or domestic violence, or stalking, know that accommodations and resources are available through the Title IX Office at pointloma.edu/Title-IX. Please be aware that under Title IX of the Education Amendments of 1972, faculty and staff are required to disclose information about such misconduct to the Title IX Office. If you wish to speak to a confidential employee who does not have this reporting responsibility, you can contact Counseling Services at counselingservices@pointloma.edu or find a list of campus pastors at pointloma.edu/title-ix.

CHANGE IN SYLLABUS OR SCHEDULE

It is possible that I will make modifications to the syllabus or schedule during the semester. If this occurs, I will make an announcement by email, in class, or both.

COURSE OUTLINE

Timeframe	**Topic**	**Stats & Methods**	**Exams/Holidays**
Week 1 – 2	Critical Consumption of Research	Advanced Literature Searches	
Week 3 – 4	Controversies in Psychological Science	Principles of Open Science	
Week 5 – 6	Navigating the IRB & Pilot Testing	Advanced Correlation	

Week 7 – 8	Data Collection	Advanced Regression	Midterm on Wednesday - October 22nd
Week 9 – 10	Data Analysis in JASP and R	Advanced T-Tests	
Week 11 – 12	Follow-up Studies and Programmatic Research	Advanced One-Way ANOVA	
Week 13 – 14	Literature Reviews	Advanced Meta-Analysis	Thanksgiving Break - November 26th-28th
Week 15 – 16	Manuscripts and Poster Presentations	Factorial ANOVA	
Final		Group Presentations: Wednesday 8:30AM - 10:00 AM	

Course Summary:

Date	Details	Due
Fri Sep 5, 2025	**Week 1: Groundwork for Research** (https://canvas.pointloma.edu/courses/80625/assignments/1223378)	due by 11:59pm
Fri Sep 12, 2025	**Week 2: Ethics and Human Participants** (https://canvas.pointloma.edu/courses/80625/assignments/1223379)	due by 11:59pm
	Week 4: Learning the Literature (https://canvas.pointloma.edu/courses/80625/assignments/1223380)	due by 11:59pm

Date	Details	Due
Fri Sep 19, 2025	Week 3: Questionable Research Practices (https://canvas.pointloma.edu/courses/80625/assignments/1223382)	due by 11:59pm
Fri Oct 3, 2025	Week 5: Experimental Design (https://canvas.pointloma.edu/courses/80625/assignments/1223381)	due by 11:59pm
Fri Oct 10, 2025	Week 6: The Institutional Review Board (https://canvas.pointloma.edu/courses/80625/assignments/1223383)	due by 11:59pm
Fri Oct 17, 2025	Midterm Professionalism (https://canvas.pointloma.edu/courses/80625/assignments/1223370)	due by 11:59pm
	Week 7: Pilot Testing (https://canvas.pointloma.edu/courses/80625/assignments/1223384)	due by 11:59pm
Wed Oct 22, 2025	Midterm (https://canvas.pointloma.edu/courses/80625/assignments/1223369)	due by 11:59pm
Fri Oct 24, 2025	Week 8: Basic Data Collection (https://canvas.pointloma.edu/courses/80625/assignments/1223385)	due by 11:59pm
Fri Oct 31, 2025	Week 9: Advanced Data Collection (https://canvas.pointloma.edu/courses/80625/assignments/1223386)	due by 11:59pm
Fri Nov 7, 2025	Week 10: Basic Data Analysis (https://canvas.pointloma.edu/courses/80625/assignments/1223372)	due by 11:59pm
Fri Nov 14, 2025	Week 11: Advanced Data Analysis	due by 11:59pm

Date	Details	Due
	(https://canvas.pointloma.edu/courses/80625/assignments/1223373)	
Fri Nov 21, 2025	Week 12: Basic Research Writing (https://canvas.pointloma.edu/courses/80625/assignments/1223374)	due by 11:59pm
Fri Nov 28, 2025	Week 13: Advanced Research Writing (https://canvas.pointloma.edu/courses/80625/assignments/1223375)	due by 11:59pm
Fri Dec 5, 2025	Final Professionalism (https://canvas.pointloma.edu/courses/80625/assignments/1223368)	due by 11:59pm
	Week 14: Basic Science Communication (https://canvas.pointloma.edu/courses/80625/assignments/1223376)	due by 11:59pm
Fri Dec 12, 2025	Final Presentation (https://canvas.pointloma.edu/courses/80625/assignments/1223367)	due by 11:59pm
	Week 15: Advanced Science Communication (https://canvas.pointloma.edu/courses/80625/assignments/1223377)	due by 11:59pm
	Roll Call Attendance (https://canvas.pointloma.edu/courses/80625/assignments/1223371)	