

PSY 3090-3 FA22 - Research Methods And Statistics I

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Office hours:	Zoom appointment available T/TH from 1:00 - 3:00 PM. Click here to book an appointment! You must schedule an appointment 12 hours before or the system will prevent you from scheduling.
Class Modality and Location:	Traditional Modality M/W Ryan Learning Center 104 F Ryan Library 213
Class Meetings:	M/W/F; 10:55 – 12:05 PM
Department:	Psychology
Units:	4
Final Exam:	Wednesday December 14th 10:30am-1:00pm
Text*:	Jhangiani, R.S., Chiang, I.C.A., Cuttler, C., & Leighton, D.C. (2017). <i>Research methods in psychology</i> (4 th edition). Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.

**Textbook note:* This is a freely-available textbook. There are many ways to read it. Follow this [link](#) to find out what works best for you!

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 doing so, 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: “Students gain experience in methods of design, data collection, management, and analysis. Students begin a significant research project. This course must be taken in the semester immediately preceding PSY 3091.”

COURSE LEARNING OUTCOMES

You will learn to:

- Apply the scientific method to study human behavior and the human mind.
- Generate scientific hypotheses and relate them to theories.
- Synthesize psychological research by finding published scientific psychological articles using online databases, and to read and correctly interpret them.
- Understand methodological and statistical concepts (e.g., external validity, ecological validity, internal validity, etc.) enough to critique existing scientific psychological research.
- Conduct statistical analyses using available software (e.g., SPSS, JASP, R), and to correctly interpret and communicate the results.
- Communicate the results of scientific research by writing APA-style empirical reports.
- Design, conduct, analyze, and present your own research study.

Objectives will be achieved through your reading of the written materials, through the lectures given and discussions led by the instructor, through in-class exercises, and through active participation by you in the production of your own experimental project.

Whether these objectives have been achieved or not will be measured by your scores on quizzes, exams, class participation, and both oral and written versions of your research project.

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.

USE OF TECHNOLOGY

In order to be successful in the online environment, you'll need to meet the minimum technology and system requirements; please refer to the Technology and System Requirements information. Additionally, students are required to have headphone speakers compatible with their computer available to use. If a student is in need of technological resources please contact student-tech-request@pointloma.edu. Problems with technology do not relieve you of the responsibility of participating, turning in your assignments, or completing your class work.

PLNU ATTENDANCE AND PARTICIPATION POLICY

Regular and punctual attendance at all synchronous class sessions is considered essential to optimum academic achievement. If the student is absent for more than 10% of class sessions (virtual or face-to-face), the faculty member may issue a written warning of de-enrollment. If the absences exceed 20%, the student may be de-enrolled without notice until the university drop date or, after that date, receive the appropriate grade for their work and participation. For example, when absences reach 20%, the final letter grade will be adjusted down one full letter grade to account for lost learning due to diminished participation and engagement (e.g., from an A to B).

Asynchronous Attendance/Participation Definition

In some courses, a portion of the credit hour content will be delivered asynchronously and attendance will be determined by submitting the assignments by the posted due dates. See Academic Policies in the Undergraduate Academic Catalog. If absences exceed these limits but are due to university excused health issues, an exception will be granted. A day of attendance in asynchronous content is determined as contributing a substantive note, assignment, discussion, or

submission by the posted due date. Failure to meet these standards will result in an absence for that day. Instructors will determine how many asynchronous attendance days are required each week.

LATE ASSIGNMENTS

Please pay close attention to the **due date** and the **available until** date. They are different. All assignments are due on the due date, but they are still eligible for reduced credit until the available until date. Each late day reduces the original assignment ceiling by an additional 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. 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.

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 [Class Schedules](#). No requests for early examinations or alternative days will be approved.

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 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. Faculty should follow and students may appeal using the procedure in the university Catalog. See [Academic Policies](#) for definitions of kinds of academic dishonesty and for further policy information.

PLAGIARISM

As the overarching goal of this course includes the ability to effectively use and summarize the research of others, it is of utmost importance that you do your best to acknowledge the work of others in an ethical manner. To this point, even well-intentioned students sometimes accidentally commit acts of plagiarism.

Students should demonstrate academic honesty by doing original work and by giving appropriate credit to the ideas of others. As explained in the university catalog, 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. Violations of university academic honesty include cheating, plagiarism, falsification, aiding the academic dishonesty of others, or malicious misuse of university resources. A faculty member who believes a situation involving academic dishonesty has been detected may assign a failing grade for a) that particular assignment or examination, and/or b) the course following the procedure in the university catalog. Students may appeal also using the procedure in the university catalog. See [Academic Policies](#) for further information.

- In this class, this involves accurately **quoting** any passages that were written by others, and accurately **citing** the ideas of others in your paper. Because Academic integrity is of tremendous importance both at PLNU and in the larger psychological community, academic dishonesty (plagiarism) in PSY 390/391 will result in a failing grade for the course.
- Since you will be working in small groups, but **writing your own individual research paper**, it is highly important that you understand what constitutes academic dishonesty in PY 390/391.
- You are not allowed to send electronic copies of **any part of your research paper** to anyone but the professor. The rationale for this rule is that students can easily cut and paste portions of your paper into their paper (and this obviously constitutes plagiarism).
- You are not allowed to loan to another student **any part of your research paper**. Students can easily copy (or paraphrase) parts of your paper for inclusion in their paper (and this constitutes plagiarism).
- If another student is found to plagiarize any part of your paper by using any of the above methods, *you* may also receive a failing grade for the course.

PLNU ACADEMIC ACCOMMODATIONS POLICY

PLNU is committed to providing equal opportunity for participation in all its programs, services, and activities. 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 619-849-2486). Once a student's eligibility for an accommodation has been determined, the EAC will issue an academic accommodation plan ("AP") to all faculty who teach courses in which the student is enrolled each semester.

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 and/or if they do not wish to utilize some or all of the elements of their AP in that course.

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.

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.

ASSESSMENT AND GRADING

Your final letter grade will be determined by a variety of assessments of your engagement, knowledge, and ability to apply what you have learned. Your grade will be determined by the overall percentage of points at the end of the semester. In order to ensure fair grading, I will calculate your grade using both total points and z scores, which measure your performance compared with the performance of the class (i.e., grading on a 'curve'). The score that will ultimately be used for you is the one that results in the **higher** of the scores. In order to pass this course, however, you must earn at least 50 % of all possible points.

Rounding:

Some of the best learning opportunities occur during in-class discussions. Participating in these discussions can be immensely valuable to your learning. To acknowledge this importance, I will give some weight in your final grade to your classroom participation. **In the event a student's final grade is within one percentage point of the next highest grade, classroom participation will be considered in assigning the final grade.**

Grading:

Quizzes	10%
Homework/In-Class Exercises	15%
Examinations	25%
Paper	30%
Group Work	10%
Presentations	<u>10%</u>

100%

Grade	Minimum Points Needed	Percentage Needed	z Score Needed	Cumulative Percent	Percent Who Receive	Category Cumulative Percent
A	465	93 %	1.33	9.2 %	9.2%	
A-	450	90 %	1.00	15.9 %	6.7%	15.9%
B+	440	88 %	.67	25.1 %	9.3%	
B	420	84 %	.33	37.1 %	11.9%	
B-	400	80 %	.00	50 %	12.9%	34.1%
C+	385	77 %	-.33	62.9 %	12.9%	
C	350	70 %	-1.00	84.1 %	21.2%	
C-	325	65 %	-1.33	90.8 %	6.7%	40.8%
D+	310	62 %	-1.67	95.3 %	4.4%	
D	275	55 %	-2.00	97.7 %	2.5%	
D-	250	50 %	-2.33	99 %	1.3%	
F	0	0	< -2.33	100 %	1.0%	9.2%

DUTY TO REPORT

Point Loma Nazarene University is committed to maintaining work, learning, and living environment that is free from sex discrimination and does not engage in or tolerate discrimination on the basis of sex in its education programs and activities, including retaliation for asserting or otherwise participating in claims of sex discrimination.

The university is also committed to providing a work, learning, and living environment that is free of sexual harassment, including retaliation for asserting or otherwise participating in claims of sex harassment.

Additionally, the title IX office has created a resource to report bias incidents. A bias incident is any intentional or unintentional act or behavior directed toward an individual or group based on any facet of the individual's or group's identities.

Bias incidents may take the form of, but are not limited to:

- Racist slurs
- Derogatory comments
- Offensive terminology
- Cultural misappropriations (e.g., taking or using things from a culture that is not your own, especially without showing that you understand or respect this culture: e.g., costumes)
- Microaggressions (e.g., subtle, nonverbal, layered insults/assaults based on race, gender, class, sexuality, language, immigration status, phenotype, accent, or surname, often carried out automatically or unconsciously)

If you would like to report a bias incident, click [here](#).

PLNU STATEMENT OF INCLUSIVITY

As a Christian community shaped by grace, truth, and holiness as a way of life, Point Loma Nazarene University is committed to pursue and reflect the diversity, inclusion, and equity of the kingdom of God. We believe that every human being is created in the image of God and that our diverse identities, experiences, and abilities enrich our learning community. We recognize that embracing inclusion and equity requires work and intentional collective growth. We trust that the Holy Spirit is at work among us and guiding us to embrace God's call toward justice, righteousness, and unity amidst diversity.

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 online (distance education) outside of California.

COURSE SCHEDULE

Week 1

Introduction and Foundations of Statistics and Research Methods

Week 2

Research Questions and Design

Week 3

Research Ethics

Week 4

Experimental and Non-Experimental Research

Week 5

Central Tendency and Dispersion

Week 6

Probability

Week 7

Distributions and Z Scores

Week 8

Validity and Reliability

Week 9

Chi Square

Week 10

Correlation

Week 11

Correlation 2

Week 12

Regression

Week 13

Statistical Power and Effect Size

Week 14

T-Test

Week 15

Analysis of Variance (ANOVA)