

**Spring 2021**

**PSY 3090-1: Research Methods and Statistics I**

**4 units**

**Synchronous Wednesday/Friday 12:15pm-1:20pm on Zoom  
(note Monday 3/29 and 5/3 to accommodate mental health days)**

Office: Culbertson 214

Office Hours: M/W/R 1:30-2:30pm (and by appointment) via Zoom

Phone: x3305

E-mail: rlorona@pointloma.edu

TA: Madeline (Maddie) Salle - [msalle6767@pointloma.edu](mailto:msalle6767@pointloma.edu)

TA Office hours via Zoom: Th 4-5pm (available for general writing and R help)

## **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 is an expression of faith. Being of Wesleyan heritage, we strive to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

## **Course Description**

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.

You're probably taking this course because you are majoring in psychology and enjoy learning about human thoughts, feelings, and behavior. But how, exactly, do psychologists get their ideas and information about humans? Well, the field of psychology is based on research and reoccurring patterns of data. Psychologists can interpret these data by utilizing statistics. Therefore, what we know about psychology is fundamentally tied to research and statistics! The abilities to understand statistics and make correct conclusions about research are critical for students and professionals in many fields. This course will introduce many commonly used statistics and designs for basic psychological research. The course will focus on the underlying theory and the interpretation of descriptive statistics, correlation, regression, t-tests, ANOVA, and

nonparametric tests. An introductory hands-on experience with the computer statistical package **R** will also be included in the course. We will practice completing and interpreting **R** analyses in class and you will have opportunities to practice on your own. We will also discuss research validity and how to be a good consumer of scientific research. You will begin designing an original study, which will be completed in the following semester.

## Course Goals/Learning Outcomes

- Distinguish between the uses and conclusions of correlation, regression, t-tests, ANOVA, and nonparametric tests and decide which type of test is appropriate for specific research questions and designs
- Remember and apply the use of null-hypothesis testing and its limitations
- Identify issues in statistics and research, such as bias, power, error, and ethics, and identify possible solutions to these issues
- Complete statistical analyses in R and correctly interpret and form conclusions based on the results of statistical analyses
- Design a psychological study or experiment that answers a research question of interest
- Communicate science accurately in written form
- Search for, obtain, and correctly interpret quality peer-reviewed research.

## Unit Requirement

In the interest of providing sufficient time to accomplish the stated Course Learning Outcomes, this class meets the PLNU credit hour policy for a 4 unit class delivered over 15 weeks. It is anticipated that students will spend a minimum of 37.5 participation hours per credit hour on their coursework. For this course, students will spend an estimated 150 total hours meeting the course learning outcomes. The time estimations are provided in the Canvas modules. Dedicating adequate time to your learning will help you succeed and is especially important if you want an A in the course. Think of it as: hours spent  $\square$  points earned. Specific details about how the class meets the credit hour requirement can be provided upon request.

## Required Texts

*Research Methods in Psychology: Evaluating a World of Information* (4<sup>th</sup> Ed) by Beth Morling

ISBN: 978-0-393-53627-0; 978-0-393-53626-3

*Learning Statistics with R*, version 0.6. by Danielle Navarro.

Download for free at <https://learningstatisticswithr.com>

## Required Technology

*RStudio, version 1.2.1335 or higher (free)*

First, download R 3.6.1 (base program) on your personal laptop for free at <https://www.r-project.org/> and then download RStudio for free at <https://www.rstudio.com/>

If you are having trouble downloading the necessary technology, please contact IT to discuss options.

Zoom class will require use of a webcam and microphone.

## Assignments and Points

*Course Engagement (6%)*: We will engage in activities and discussion, both on Zoom (Sync Time) and on Canvas. You will be graded on the extent to which you respectfully participate in/complete course activities and discussions throughout the semester. It is expected that each student will give a thoughtful contribution to each activity/discussion and that each student will be fully present and engaged on Zoom.

*Midterm Learning Demonstrations (24%)*: There will be multiple choice, fill-in-the-blank, and/or short answer questions on each learning check that will be from readings, lectures, and activities. Learning checks will be open [written] note, but timed. Use of the internet or navigating away from the Canvas quiz page will not be allowed for any reason. You may write or print your notes to use, but you may not use digital notes or resources.

*Assignments (45%)*: You will have weekly assignments to complete throughout the semester (usually due each Friday). From these assignments, you will gain experience reviewing research, communicating research findings, developing a research idea, using R, and interpreting statistics. These assignments are meant to reinforce theories and concepts. Detailed directions and grade expectations for each assignment are on Canvas.

*Final Learning Demonstration (20%)*: We will celebrate all of our learning at the end of the semester. You will demonstrate your learning by responding to written questions that will require cumulative knowledge.

*Final Research Celebration (5%)*: We will be celebrating the learning of the Methods II students by attending their research poster session. You will celebrate the learning of your peers by asking them meaningful questions about their work and congratulating them on their work. To earn credit, you must attend the session, complete a worksheet,

and maintain a positive and professional demeanor during the session. There will be no make-ups for students who are absent.

*Extra Credit (up to 2% added on final LD):* You may earn up to 2% added to your Learning Demonstration grade by submitting a creative assignment related to course content. Examples include creating a music video, dance, art piece, poem or story, or something else that uses your talents. A basic powerpoint or prezi is not sufficient for this assignment. Your extra credit will be graded according to time spent and effort shown, not according to the subjective quality of your creativity. Extra credit must be submitted by the day of the final learning demonstration with no exceptions.

## **Grading Scale**

A	=	93-100%
A-	=	90-92.9%
B+	=	88-89.9%
B	=	84-87.9%
B-	=	80-83.9%
C+	=	77-79.9%
C	=	70-76.9%
C-	=	65-69.9%
D+	=	62-64.9%
D	=	55-61.9%
D-	=	50-54.9%
F	=	49.9% or less

## **Course Policies and Expectations**

### **Covid Contingencies**

- Obviously, this will be a semester unlike most others. I recognize that many of us have additional stressors during this time. I can grant extensions as needed for individual students who communicate compelling needs.
- Should we move to face-to-face classes mid-semester, policies and assignments may be changed to reflect that new reality. My hope is that not many, if any, changes will need to be made. Nevertheless, any changes to the syllabus (including course expectations and assignments) will be posted on Canvas.

### **General and Attendance**

- At minimum, students should complete the assigned reading prior to Zoom class. Such practices will enable you fully participate in class activities.

- Most major assignments are due at the end of the day (11:59pm) on Friday. However, there are due dates that are dispersed in the modules. It is the student's responsibility to manage those deadlines.
- Regular and punctual attendance at all synchronous class sessions is considered essential to optimum academic achievement. Attendance will be taken at the beginning of the Zoom session. If you are more than 15 minutes late to class, you will be counted absent. If you leave class early, you will be counted absent unless you notify me before class begins. If the student is absent for more than 10 percent of class sessions (i.e., misses 2 weeks of Zoom meetings), 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 drop date or, after that date, receive the appropriate grade for their work and participation.
- Additionally, 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. 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. 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.
- If you miss class, you are responsible for obtaining [from a classmate] lecture material, class exercises, and all in-class announcements AND submit any assignments on time, if applicable.
- You are responsible for all content/material that is found on Canvas, including announcements.

### **Submitting Assignments**

- In general, you have one week to complete each module (Saturday to Friday each week). You may submit assignments early.
- Assignments are individual work; you are expected to complete the work on your own.
- Work submitted on Canvas must be in .doc or .docx file types only. The student is responsible for making sure Canvas files work and go through Turnitin. Files that do not open, are in the wrong file type, and/or can't go through Turnitin will be considered late until the problem is rectified.
- Late work is accepted for 3 days, with a 10% deduction for each day, including weekend days. Due dates can be found on Canvas within each module.

### **Learning Demonstration (LD) Information**

- LDs will be offered at specific times that correspond to our class time. This is to ensure everyone has the same opportunity to study and complete the LD.
- LDs will consist of multiple choice, fill-in-the-blank, and/or short answer questions. You may be required to interpret and evaluate statistics and research conclusions in addition to demonstrating knowledge of relevant definitions and theories from lectures and required readings.
- Each LD is cumulative in nature.
- LDs are open written note. Digital notes and the open internet may not be used. I will be checking Canvas Quiz logs to see whether students are navigating away from the Canvas page at any point during the LD. If Canvas indicates that the student navigated away from the page, this will count as academic dishonesty and the student will get a zero on the LD. To avoid any mishaps, student should close all programs and web browsers and should full screen the LD webpage.

- Written responses should be written in the student's own words (not lifted from the textbook or lecture). Any LD responses that are not in the student's own words will be treated as academic dishonesty. I reserve the right to implement use of Honorlock at any point.
- The final learning demonstration cannot be dropped or missed for any reason. Successful completion of this course requires the on-time completion of the Final Learning Demonstration on **June 7<sup>th</sup> from 10:30-1pm.**

## **Additional Info, University Resources and Policies**

About Contacting Me. I welcome your questions (about class or otherwise) and would enjoy hearing from you throughout the semester. Do not hesitate to email me or take advantage of office hours. We can schedule meetings outside of office hours if needed. I will give prompt email replies during the day Monday - Friday. It is not guaranteed that I will read emails in the evenings and weekends, so please do not leave important questions for the last minute!

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.

### 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.

Academic Integrity. 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. Academic dishonesty also includes such acts as cheating, fabrication of information, misrepresentations, having unauthorized possession of exams or acquiring/providing information about exams to offer/get an advantage. Academic dishonesty may lead to a zero for that assignment or examination, a zero for your professionalism grade, and/or an F 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 information.

Accommodations. While all students are expected to meet the minimum standards for completion of this course as established by the instructor, students with disabilities may require academic adjustments, modifications or auxiliary aids/services. At Point Loma Nazarene University (PLNU), these students are requested to register with the Disability Resource Center (DRC), located in the Bond Academic Center ([DRC@pointloma.edu](mailto:DRC@pointloma.edu) or 619-849-2486). The DRC's policies and procedures for assisting such students in the development of an appropriate academic adjustment plan (AP) allows PLNU to comply with Section 504 of the Rehabilitation Act and the Americans with Disabilities Act. Section 504 prohibits discrimination against students with special needs and

guarantees all qualified students equal access to and benefits of PLNU programs and activities. After the student files the required documentation, the DRC, in conjunction with the student, will develop an AP to meet that student's specific learning needs. The DRC will thereafter email the student's AP to all faculty who teach courses in which the student is enrolled each semester. The AP must be implemented in all such courses.

If students do not wish to avail themselves of some or all of the elements of their AP in a particular course, it is the responsibility of those students to notify their professor in that course. PLNU highly recommends that DRC students speak with their professors during the first two weeks of each semester about the applicability of their AP in that particular course and/or if they do not desire to take advantage of some or all of the elements of their AP in that course.

Plnu Attendance And Participation Policy. Students taking online courses are expected to attend each week of the course. Attendance is defined as participating in an academic activity within the online classroom which includes posting in a graded activity in the course. (Note: Logging into the course does not qualify as participation and will not be counted as meeting the attendance requirement.)

Students who do not attend at least once in any 3 consecutive days will be issued an attendance warning. Students who do not attend at least once in any 7 consecutive days will be dropped from the course retroactive to the last date of recorded attendance.

#### 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](mailto: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.

#### Spiritual Care

Please be aware PLNU strives to be a place where you grow as whole persons. To this end, we provide resources for our students to encounter God and grow in their Christian faith.

If students have questions, a desire to meet with the chaplain or have prayer requests you can contact the [Office of Spiritual Development](#).

Title IX Office. If you or someone you know would like help related to an experience of sexual violence including sexual assault, harassment, domestic violence, dating violence, stalking or other type of non-consensual sexual conduct, please contact the Title IX Coordinator at Point Loma Nazarene University, Caye Smith (619-849-2479). Reporting is also available on the Title IX website. The Title IX office understands the sensitive nature of these situations and can provide information about available on- and off-campus resources, such as counseling and psychological services, medical treatment, academic support, university housing and other forms of assistance. Staff members at the office will also explain your rights and the judicial process options, if you choose to file a complaint. If you or someone you know feels unsafe or may be in imminent danger, please call the PLNU Department of Public Safety (619-849-2525) or local police department (9-1-1) immediately.

Student Success and Wellness. If you or someone you know would like help related to a physical or mental health problem, (e.g., depression, anxiety, difficulty focusing on school or managing daily needs, grief, trauma resolution, sleep or eating changes, etc.), and/or would like academic assistance, please contact the appropriate office using the following information.

- o Counseling Services 619-849-2574; [sdwellnesscenter@pointloma.edu](mailto:sdwellnesscenter@pointloma.edu)
- o Disability Resource Center 619-849-2533; [drc@pointloma.edu](mailto:drc@pointloma.edu)
- o Medical Services 619-849-2280; [sdwellnesscenter@pointloma.edu](mailto:sdwellnesscenter@pointloma.edu)
- o Tutorial Services 619-849-2953; [tutorialservices@pointloma.edu](mailto:tutorialservices@pointloma.edu)

Please see the weekly overview for assignments due each week. Assignments and due dates will always be posted and available in advance.