



BA in Applied Psychology

APY3020: Data Analysis and Visualization

3 Units

Fall 2025 | Quad 1

Fully Online

January 12 - March 8

Meeting Days: Online Asynchronous

Instructor: Dr. Laura Dimler

Meeting Times: Online Asynchronous

Email: lradziwo@pointloma.edu

Meeting Location: Online

Office Location and Hours: Zoom; by appointment

Final Exam: (Day/Time): Final Group and Personal Project

[Book an appointment](#)

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

This course bridges psychological inquiry with practical data analysis and visualization skills. Through hands-on projects, students learn how to interpret psychological data, identify meaningful patterns, and communicate insights clearly using visual tools. Emphasis is placed on applying these techniques to real-world questions in education, health, ministry, business, and community contexts.

Course Learning Outcomes

After completing APY 3020, you will be able to:

1. **Explain key data analysis techniques and visualization principles** and their application to psychological research and inquiry (PLO 1). This outcome will introduce you to the foundational methods for interpreting and communicating complex psychological data.
 2. **Apply data analysis tools to process and interpret psychological datasets**, using visualization to convey meaningful insights (PLO 2). This outcome will equip you with practical skills for analyzing and presenting data effectively in professional settings.
 3. **Evaluate the ethical and societal implications of data analysis and visualization practices**, integrating psychological principles with faith-based and cultural perspectives (PLO 3). This outcome encourages you to consider the responsible use of data in addressing real-world challenges.
 4. **Reflect on how self-awareness and critical thinking enhance the interpretation and communication of data**, fostering professional competence (PLO 4). This outcome will help you develop skills for making data-informed decisions with integrity.
 5. **Develop culturally sensitive and inclusive data visualization strategies**, ensuring that representations of psychological data respect diverse perspectives and promote social equity (PLO 5). This outcome will support you in crafting ethical and impactful data presentations.
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Program Learning Outcomes

In this course, you will be introduced to the following Program Learning Outcomes, which outline what you'll develop across your studies in the B.A. in Applied Psychology program:

1. **Holistic Understanding:** Demonstrate a holistic understanding of applied psychology, integrating personal, educational, health, and societal dimensions in their analysis and application of psychological principles.
2. **Practical Application:** Apply psychological theories, methodologies, and interventions to real-world contexts, effectively addressing contemporary professional challenges and opportunities.
3. **Social Impact:** Critically evaluate and apply psychological principles to promote positive social change, advocating for ethical and evidence-based practices that contribute to the well-being of individuals and communities
4. **Personal Growth:** Cultivate social and emotional intelligence skills, demonstrating self-awareness, empathy, and resilience in personal and social interactions, and integrating these skills into their professional practice.
5. **Cultural Competence:** Demonstrate cultural and intellectual humility by recognizing and respecting individual differences and their cultural origins, and effectively navigating diverse and dynamic environments with sensitivity and inclusivity.

Note: In this introductory course, these PLOs are introduced but will not yet be assessed.

Institutional Learning Outcomes

1. **Learning, Informed by our Faith in Christ**
Students will acquire knowledge of human cultures and the physical and natural world while developing skills and habits of the mind that foster lifelong learning.
2. **Growing, In a Christ-Centered Faith Community**
Students will develop a deeper and more informed understanding of others as they negotiate complex professional, environmental and social contexts.

3. Serving, In a Context of Christian Faith

Students will serve locally and/or globally in vocational and social settings.

Required Texts and Recommended Study Resources

Students are responsible for having the required course textbooks prior to the first day of class. You are encouraged to begin reading the books in preparation for the class as soon as possible.

Required Texts

- [Castro & Mordkoff \(2023\). Data Analysis in the Psychological Sciences](#) (open resource)
- [Online Statistics Education: A Multimedia Course of Study](http://onlinestatbook.com/) (<http://onlinestatbook.com/>). Project Leader: [David M. Lane](#), Rice University. (open resource)

The selected course resources were chosen to give you both the practical skills and conceptual understanding needed for data analysis and visualization. They provide step-by-step guidance for managing and analyzing data while also explaining the logic behind key statistical methods. Paired with visualization blogs and guides, these resources will equip you to interpret psychological data and communicate insights effectively to real-world audiences.

Supplemental Materials

All supplemental materials posted on this course site (including articles, book excerpts, or other documents) are provided for your personal academic use. These materials may be protected by copyright law and should not be duplicated or distributed without permission from the copyright owner.

Note: Students are responsible for having the required textbooks prior to the first day of class. Students are also encouraged to begin reading the books in preparation for the class as soon as possible.

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. All supplemental materials posted on this course site (including articles, book excerpts, or other documents) are provided for your personal academic use. These materials may be protected by copyright law and should not be duplicated or distributed without permission of the copyright owner.

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 3-unit class delivered over 8 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 112.5 total hours meeting the course learning outcomes. The time estimations are provided below and in the Canvas modules.

Estimated Time to Complete Course

<i>Activity Category</i>	<i>Average Weekly (Hours)</i>	<i>Time-to-Complete (Hours)</i>
Required Resources	4	24
Collaborating (Group Project)	3	24
Personalizing (Personal Project)	4	32
Discussing (Discussion Board)	2	12
Applying (Mini Assignments)	1	6.5
Quizzes		2

<i>Total:</i>	14	112.5
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Assessment and Grading

Weighted Grades

This course uses weighted grades. Each assignment category is worth a certain percentage of the total grade (100%) for the course, as specified in the table below:

Course Assignments		
<i>Assignment Category</i>	<i>Description</i>	<i>Percentage of Total Grade</i>
Weekly Discussions	Weekly discussions simulate real-world collaboration and data storytelling. Through short video or audio posts, you’ll explain insights, reflect on project progress, and practice communicating psychological data to a general audience. CLO Alignment: Communicate data insights clearly and ethically in applied contexts (CLO 2, CLO 4, CLO 5).	10
Mini Assignments	These short, focused activities provide hands-on practice with core data and visualization skills. Each mini assignment helps you apply weekly concepts directly to your personal and group projects (e.g., descriptive summaries, chart selection, revision exercises). CLO Alignment: Apply key data analysis and visualization techniques to psychological datasets (CLO 1, CLO 2).	10
Personal Project	In your individual Psychological Data Analysis Portfolio, you’ll explore a dataset, conduct basic analyses, and create visualizations to answer a meaningful psychological or societal question. Each week builds a new section of the final report, culminating in a polished professional portfolio. CLO Alignment: Interpret and communicate psychological data with ethical, cultural, and professional awareness (CLO 1, CLO 2, CLO 3, CLO 4, CLO 5).	25
Group Project	In your team’s Data-Driven Insights Report, you’ll collaborate to analyze a shared dataset, produce visualizations, and present actionable findings in a professional stakeholder briefing. Emphasis is placed on teamwork, shared accountability, and communication for non-specialist audiences. CLO Alignment: Apply data analysis collaboratively and evaluate ethical, societal, and cultural implications of psychological data use (CLO 2, CLO 3, CLO 4, CLO 5).	25
Quizzes	Short auto-graded quizzes help you check your understanding of core statistical and visualization concepts (e.g., “Which Test Should I Use?” and “Chart Smarts”). These reinforce foundational knowledge essential for your projects. CLO Alignment: Explain and apply foundational statistical reasoning to psychological inquiry (CLO 1, CLO 2).	10
Professionalism	Assessed based on timeliness, adherence to guidelines, respectful communication, engagement in peer interactions, and overall	10

	commitment to coursework.	
	CLO Alignment: Apply emotional intelligence and self-awareness to foster personal growth (CLO 4).	
	Total	100

Student grades for assignments will be posted in the Canvas gradebook. It is important to read the comments posted in the gradebook, as these comments are intended to help students improve their work. Final grades will be posted by the due date as posted in the Academic Calendar.

Professionalism Criteria

Professionalism includes:

- **Timeliness:** Submitting assignments and participating in discussions promptly.
- **Adherence to Guidelines:** Following instructions and maintaining academic integrity.
- **Respectful Communication:** Demonstrating courtesy and constructive interaction in discussions and collaborations.
- **Engagement in Peer Interactions:** Actively participating in collaborative projects and showing consideration for group members.
- **Commitment to Coursework:** Consistent, dedicated engagement with readings, assignments, and discussions.

Grading Scale

The following grading scale will be used for all exams and final course grades:

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

Incompletes and Late Assignments

All assignments are to be submitted by the due dates. There will be a 10% reduction of possible points for **each day** an assignment is late, and assignments will **not be** accepted for credit four days after the due date. If missing assignments result in the failure to meet learning outcomes, you may receive a letter grade reduction on the final grade in addition to the loss of points for missing work. Assignments will be considered late if posted after the due date and time using Pacific Standard Time. No assignments will be accepted after midnight on Sunday night, the last day of class.

Exceptions for extenuating circumstances must be pre-approved by the instructor and the program director.

PLNU Spiritual Care

PLNU strives to be a place where you grow as a whole person. To this end, we provide resources for our Graduate and Adult Undergraduate students to encounter God and grow in their Christian faith. We have on-site chaplains at our different campuses who may be available during class break times across the week. If you have questions or a desire to meet or share any prayer requests with our chaplains, you can find them at the [Chaplain's Page](#) via myPLNU.

In addition, the Mission Valley and Balboa campuses have a prayer chapel for use as a space set apart for quiet reflection and prayer.

In addition, on the MV campus, there is a prayer chapel on the third floor, which is open for use as a space set apart for quiet reflection and prayer.

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 of California.

PLNU Copyright Policy

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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 personnel.

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 [Adult Undergraduate Academic and General Policies](#) for definitions of kinds of academic dishonesty and for further policy information.

During the first week of class, you will be asked to submit an Academic Honesty Verification Statement. Submitting the statement is a requirement of this course. By submitting the Academic Honesty Verification Statement, you will be verifying that all assignments completed in this course were completed by you. Carefully review the Academic Honesty Statement below.

Statement: “In submitting this form, I am verifying that all the assignments in this course will be completed by me and will be my own work.”

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. Please use the following sources to guide your citations when using AI.

- [MLA Style Center: Citing Generative AI](#)
 - [APA Style: How to Cite ChatGPT](#)
 - [Chicago Manual of Style: Citing Content Developed or Generated by AI](#)
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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 619-849-2486). 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. The EAC makes accommodations available to professors at the student’s request.

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 ensure 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 special 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 the 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) has experienced other forms of discrimination, you can find more information on reporting and resources at [PLNU's Nondiscrimination webpage](#).

Sexual Misconduct and Discrimination

Point Loma Nazarene University faculty are committed to helping create a safe learning environment for all students. 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 help and support are available through the [Title IX Office](#). Please be aware that under Title IX of the Education Amendments of 1972, it is 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 via our [Sexual Harassment and Discrimination Policy](#).

If you (or someone you know) has experienced other forms of discrimination or bias, you can find more information on reporting and resources via our [Nondiscrimination and Anti-harassment Policy](#).

PLNU Attendance and Participation Policy

Regular and punctual attendance at all class sessions is considered essential to optimum academic achievement. Therefore, regular attendance and participation in each course are minimal requirements.

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.

Students who anticipate being absent for an entire week of a course should contact the instructor in advance for approval and make arrangements to complete the required coursework and/or alternative assignments assigned at the discretion of the instructor. Acceptance of late work is at the discretion of the instructor and does not waive attendance requirements.

Refer to [Academic Policies](#) for additional details.

Synchronous Attendance/Participation Definition

For synchronous courses that have specific scheduled meeting times (including in-person, hybrid, and synchronous online courses), absences are counted from the first official meeting of the class, regardless of the date of the student’s enrollment. For courses with specific attendance requirements, those requirements are outlined in the course syllabus.

Note: For synchronous courses with an online asynchronous week, refer to the Online Asynchronous Class Attendance policy listed below.

Online Asynchronous Attendance/Participation Definition

Students taking online courses with no specific scheduled meeting times are expected to actively engage throughout each week of the course. Attendance is defined as participating in an academic activity within the online classroom, which includes, but is not limited to:

- Engaging in an online discussion
- Submitting an assignment
- Taking an exam
- Participating in online labs
- Initiating contact with a faculty member within the learning management system to discuss course content

Note: Logging into the course does not qualify as participation and will not be counted as meeting the attendance requirement.

Course Modality Definitions

1. Online Courses: These are courses with class meetings where all instruction and interaction are fully online.
 1. Synchronous Courses: At least one class meeting takes place at a designated time.
 2. Asynchronous Courses: All class meetings are asynchronous.
 2. Hybrid Courses: These are courses with class meetings that take place both in the classroom and online synchronously and/or asynchronously.
 3. In-Person Courses: These are courses that meet in person with the instructor and students in a physical classroom setting. With approval by the area dean, this may include up to 25% of qualified class interactions through a Learning Management System (such as Canvas).
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Use of Technology

In order to be successful in the online or hybrid 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, a microphone, or a webcam compatible with their computer available to use. Please note that any course with online proctored exams requires a computer with a camera (tablets are not compatible or allowable) to complete exams online.

Problems with technology do not relieve you of the responsibility of participating, turning in your assignments, or completing your class work.

GPS Academic Resources

PLNU offers the following free academic resources virtually for Graduate Professional Studies (GPS) Students. Visit myPLNU through the links below for more information.

- [The GPS Writing Center](#) offers:
 - **Zoom Writers Workshops** are offered each quad on a variety of helpful topics
 - **One-to-one appointments** with the Writing Coach
 - **Microlearning YouTube Video Library** for helpful tips anytime
 - [Research Help Guide](#) to help you start your research
 - The physical office is located on the third floor of the [Mission Valley Regional Center](#), off the student lounge
 - [Academic Writing Resources Course](#): Found on your Canvas Dashboard, this course is non-credit with 24/7 access, no time limits, and self-paced content. [Watch a quick video run-through](#) and take time now to explore!
 - [Grammarly](#): Students have unlimited FREE access to Grammarly for Education, a trusted tool designed to help enhance writing skills by providing real-time feedback, identifying areas for improvement, and providing suggestions. Grammarly's Generative AI is NOT available with our student accounts.
 - [Tutoring](#): Students have access to 24/7 live or scheduled subject tutoring through Tutor.com, including a Paper Drop-Off Service with feedback within 12 hours.
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Assignments-at-a-Glance

The course summary below lists our assignments and their due dates. Click on any assignment to review it.