



Point Loma Nazarene University, Spring 2026

## Introduction to Statistics

Department of Mathematical, Information, and Computer Science – School of STEM

<b>Professor:</b> Kyle Havens	<b>Course:</b> Math 2003	<b>Classroom:</b> LS 201	<b>Units:</b> 3
<b>Office:</b> Rohr Science 288	<b>Days:</b> Tuesday and Thursday		<b>Section 1:</b> 2:30-3:45pm
<b>Phone:</b> (619) 849-3362	<b>Email:</b> <a href="mailto:kylehavens@pointloma.edu">kylehavens@pointloma.edu</a>		<b>Section 2:</b> 4:00-5:15pm

**Final Exam:** The final exam is administered at the following time in the liberty station main conference room:

**All Sections: Wednesday, May 6<sup>th</sup> from 7:30am to 10:00am**

**PLNU Mission – Teach, Shape, 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.

**Department Mission:** The Mathematical, Information, and Computer Sciences department at Point Loma Nazarene University is committed to maintaining a curriculum that provides its students with the tools to be productive, the passion to continue learning, and Christian perspectives to provide a basis for making sound value judgments.

**Course Description:** A first course in statistics for the general student. Description of sample data, probability theory, theoretical frequency distributions, sampling, estimation, and hypothesis testing. Not applicable toward a major in mathematics.

**Office Hours:** Located in Rohr Science. Professor Havens has open office hours at the following times:

Monday	Tuesday	Wednesday	Thursday	Friday
7:30am-8:15am	9:00-11:45am	*12:15-2:30pm	10:45-11:45am	7:30am-8:15am
9:45-10:45am		*by appointment		12:15-1:15pm

**Program and Course Learning Outcomes:** Upon completion of this course:

1. Students will be able to apply their technical knowledge to solve problems.
2. Students will be able to compute measures of central tendency for data.
3. Students will be able to compute measures of dispersion for data.
4. Students will be able to use statistical methods to test hypotheses.
5. Students will be able to understand and create arguments supported by quantitative evidence, and they can clearly communicate those arguments in a variety of formats.

**Class Performance:** Your final grade in this course is calculated by the following system. Details on next page.

30%	Final Exam	A cumulative exam covering all the course material
35%	Exam Average	The average score of your two in-class exams
12%	Written Homework	Traditional written homework from the textbook
10%	Lab Assignments	Average score of seven Excel guided application labs
5%	Lab Final	A short in-person lab final on statistics in Excel
8%	Class Activities	Based on completion of individual and group activities
2%	Participation	You lose points for being late, leaving early, or missing class

**Required Materials:** You should have the required course materials by the end of the **first day of class**.

1. The textbook: *The Basic Practices of Statistics*, 9<sup>th</sup> Edition (ISBN: 9781319244378)
2. A scientific or graphing calculator to use during class time (*Note:* A scientific calculator model TI-30XIIS will be provided for you to use on exams. You may not use your own calculator.)
3. A laptop with access to Canvas and Microsoft Excel (*Note:* Instructions to download Excel are posted in Canvas)

**Good Attendance:** A student with no more than one unexcused absence is defined to have good attendance.

**Letter Grade:** The letter grade you receive in this course is based on the final percentage score you earned in the previously described weighted grading system. Requests for an opportunity to improve your grade due to personal circumstances will be denied. Borderline grades may be rounded up if student has good attendance.

[92%,100%]: A	[82%,88%]: B	[70%,78%]: C
[90%,92%): A-	[80%,82%): B-	[68%,70%): C-
[88%,90%): B+	[78%,80%): C+	[60%,68%): D

**Final Exam:** Successful completion of this class requires taking the final examination on its scheduled day. The final examination schedule is posted on the [PLNU's 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.

**Exams:** There are two examinations, each covering roughly six weeks of content. See the course schedule for more information. A scientific calculator will be provided on the exam; you may not use your own calculator. One 8.5"x11" page of notes will be allowed on each exam. Smart devices, such as phones, watches, and glasses, are not allowed on the exam. No make-up exams are allowed without prior consent. **Contact me before missing an exam if you have a critical emergency.** If you do not inform me that you will be missing an exam you will get a zero on that exam. Exams are weighted equally at 17.5% of your total grade. If you have good attendance, I will adjust the weighted scale of the exams in your favor, 22.5% for the highest exam and 12.5% for the lowest. Practice multiple choice questions will be posted on Canvas in advance designed to help you identify topics that you need to study further.

**Written Homework:** Written homework problems are assigned from the textbook and will be submitted to Canvas. The problems are to be done by hand and are assigned from your textbook. The due dates will be posted in Canvas, but typically you will have at least one week to complete the assignments from a chapter after it is covered in class. Each written problem set will consist of anywhere from ten to thirty questions. A random sample 4-5 questions will be graded for correctness by a student grader. The rest will be graded for completion. Your homework must be submitted to Canvas upload as a single PDF file. It is important that your work is legible and organized. If your submission is **blank, illegible, or causes an error it will receive a zero**. You must check your submission to ensure it can be viewed or downloaded and opened. I encourage you to work together or get help on your homework if needed. Attending office hours is highly recommended. Directly copying an online source (such as AI or a solutions manual) or another student's homework is considered academic plagiarism and will not be tolerated. **Submitting work directly copied from any source will result in a warning and a score of zero.** Repeat offenses will be reported as dictated in [PLNU's Academic Honesty Policy](#).

**Class Activities:** Mathematics requires active participation. Participation means asking questions, taking notes, making conjectures and checking them, providing solutions to problems, and sharing ideas with classmates. I will act as the expert facilitator during class time, with a mixture of lecture, group problem solving, use of technology, and integrated discussion. You will receive participation credit for your attendance by using the sign-in sheet. If you arrive late or leave early you will be marked ½ off for the day. Every class we will work on an individual or group-oriented activity directly related to the chapters of study. You are to work on them in your groups and submit them to Canvas by the last day of lecture on the subject. Generally, you will be graded by a mixture of completeness and correctness as with the written homework.

**Lab Assignments:** Each lab assignment is a write up that outlines your completion of the lab. Labs are completed in Microsoft Excel, but your submission is a lab write up where you answer the variety of questions in a word document. **You must bring your laptop to class on the lab days.** Labs are submitted to Canvas as a single PDF file, never just an Excel booklet. Each lab has a guided section and an application section. The guided section will teach you how to use Excel to calculate statistics, and the application section will ask you to apply what you learn. There is dedicated class time to working on the labs with your professor and your classmates. **The labs are individual assignments.** Collaboration between

students is encouraged but copying the lab reports of others is not tolerated. Even if you work together, you should be using your own words, your own spreadsheet, and your own screenshots when necessary. If you submit the same workbook or have the same write-up as another student you will get a zero and will face repercussions with academic affairs.

**Lab Final:** The lab final will occur the last week of class and will be a short test of your Excel comprehension. You are required to bring your laptop to class on that day.

**Late Work:** A maximum of one assignment from each category (written homework, class activities, lab) can be turned in late subject to a 10% penalty as long as the assignment is submitted before the corresponding exam. Other late work (which includes blank, illegible, or erroneous files) is not accepted. If you have a documented emergency that might require you to submit any additional late work, contact me before the assignment deadline with your emergency.

**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 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 115 estimated total hours meeting the course learning outcomes.

**Artificial Intelligence Policy:** You are allowed to use Artificial Intelligence (AI) tools (e.g. ChatGPT, Gemini Pro 1.5, GrammarlyGo, Perplexity, etc.) to generate ideas, but you are **not allowed** to use AI tools to generate content (math, text, video, audio, images) that will end up in any work submitted to be graded for this course. If you have any doubts about using AI, please gain permission from the instructor.

**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](mailto: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.

**LomaBooks Instructions for Students:** This course is part of our course material delivery program, **LomaBooks**. The bookstore will provide each student with a convenient package containing all required physical materials; all digitally delivered materials will be integrated into Canvas.

You should have received an email from the bookstore confirming the list of materials that will be provided for each of your courses and asking you to select how you would like to receive any printed components (in-store pick up or home delivery). If you have not done so already, please confirm your fulfillment preference so the bookstore can prepare your materials. For more information about **LomaBooks**, please go: [HERE](#)

**Additional Course Information:** Additional PLNU policies and practices that apply to this course can be found at the link below. The link includes PLNU's statement on spiritual care, state authorization, copyright policy, recording notification, academic honesty policy, language and belonging, sexual misconduct and discrimination, attendance and participation policy, course modality definitions, LomaBooks, use of technology, and the Loma Writing Center.

<https://docs.google.com/document/d/11BgAANLOJ9tjt837d24EZ181ukM2qzHF/>

**Course Schedule:** This course syllabus and schedule are subject to change due to unforeseen circumstances.

Week of	Tuesday	Thursday	Due Soon
1/12/2026	<b>Lecture:</b> Intro and Chapter 1 <i>Picturing Distributions</i>	<b>*Lab 1 and Lecture:</b> Chapters 1-2 <i>Numerical Stats &amp; Lab 1</i>	Survey, Intro Quiz, Materials Photo Name Slide, Lab #1
1/19/2026	<b>Lecture:</b> Chapter 2 <i>Describing Data &amp; Misuses</i>	<b>*Lab 2:</b> Chapters 1-2 <i>Summarizing Data</i>	Class Activity #1 Excel Lab #1
1/26/2026	<b>Lecture:</b> Chapter 4 <i>Scatterplots and Correlation</i>	<b>Lecture:</b> Chapter 4-5 <i>Linear Regression</i>	Written Homework #1 Excel Lab #2
2/2/2026	<b>Lecture:</b> Chapter 5-6 <i>Comparison &amp; Two-Way Tables</i>	<b>*Lab 3:</b> Chapters 4-6 <i>Relationships between Variables</i>	Class Activity #2 Written Homework #2
2/9/2026	<b>Lecture:</b> Chapter 3 <i>Intro to the Normal Distribution</i>	<b>Lecture:</b> Chapter 3 <i>Normal Distribution and Z-Tables</i>	Class Activity #3 Excel Lab #3
2/16/2026	<b>*Lab 4:</b> Chapter 3 <i>Relating Data to Z-Distributions</i>	<b>Lecture:</b> Chapters 1-6 <i>Catch Up &amp; Review for Exam</i>	Excel Lab #4 Written Homework #3
2/23/2026	<b>Exam #1</b>	<b>Lecture:</b> Chapter 8-9 <i>Sampling and Experiments</i>	Class Activity #4
3/2/2026	<b>Lecture:</b> Chapter 15 <i>The Central Limit Theorem</i>	<b>Lecture:</b> Chapter 16 <i>Confidence Intervals</i>	Class Activity #5 Written Homework #4
3/9/2026	<i>Spring Break</i>		<i>Spring Break</i>
3/16/2026	<b>Lecture:</b> Chapter 17 <i>Hypothesis Tests</i>	<b>Lecture:</b> Chapter 18 <i>Statistical Inference in Practice</i>	Class Activity #6 Written Homework #5
3/23/2026	<b>Lecture:</b> Chapter 20 <i>T-Distributions and Tests</i>	<b>*Lab 5:</b> Chapter 16-20 <i>Intervals and Tests in Excel</i>	Class Activity #7 Written Homework #6
3/30/2026	<b>Lecture:</b> Chapter 21 <i>Comparing Two Sample Means</i>	<i>Easter Break</i>	Excel Lab #5
4/6/2026	<b>Lecture:</b> Chapters 8-9 & 15-21 <i>Catch Up &amp; Review for Exam</i>	<b>Exam #2</b>	Class Activity #8 Written Homework #7
4/13/2026	<b>*Lab 6 and Lecture:</b> Chapter 27 <i>More than Two Samples - ANOVA</i>	<b>Lecture:</b> Chapter 22 <i>Proportions &amp; Statistical Inference</i>	Excel Lab #6 Written Homework #8
4/20/2026	<b>Lecture:</b> Chapter 23 <i>Two Sample Proportions</i>	<b>*Lab 7 and Lecture:</b> Chapter 25 <i>More than Two Samples - Chi<sup>2</sup></i>	Class Activity #9 Written Homework #9
4/27/2026	<b>Lecture:</b> All Chapters <i>Catch Up &amp; Review for Final</i>	<b>Lab Final</b>	Excel Lab #7 Written Homework #10
5/4/2026	<i>Finals Week</i>	<b>Final Exam</b> <i>Wednesday @ 7:30am</i>	<i>Finals Week</i>