Point Loma Nazarene University, Summer 2025

Introduction to Statistics

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

Instructor: Kyle Havens	**Course:** Math 2003	**Section:** 1	**Units:** 3
Office Hours: T-R 8:30-9:15am	**Class Days:** Wednesday	**Time:** 7:30-9:15am	

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.

Required Materials:

1. Achieve Access Code – *The Basic Practices of Statistics*, 9th Edition by Moore et al. (ISBN: 9781319344634)
   - Physical Textbook is Optional – *The Basic Practices of Statistics*, 9th Edition (ISBN: 9781319244378)
2. Access to a computer and internet suitable to use the statistical software:
   - Microsoft Excel – Can be downloaded for free using your PLNU account, see Canvas.
3. Graphing Calculator (TI-84+ recommended)

Office Hours: Professor Havens will be on Zoom Tuesday/Thursday from 8:30-9:15am and from 4-4:45pm. Please contact Professor Havens if you'd like to make an appointment for Zoom office hours but cannot make our scheduled time. Give 24-hour notice.

Student Learning Outcomes:

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.

40%	Final Exam	Cumulative. You must get a "D" on the final exam to pass.
25%	Midterm Exam	The average score of your two in-class exams
10%	Lab Assignments	Average score of your nine labs with application questions.
10%	Online Homework	Traditional written homework from the textbook.
15%	Class Activities	Based on completion of group activities and 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: The final exam is cumulative and will be held at the following time in the liberty station conference room:

Thursday, June 12th from 7:30am to 10:00am

Exams: There will be one midterm exam and one final exam during covering roughly two-three weeks of content each. See the course schedule for more information. One 8.5"x11" page of notes will be allowed on each exam. Calculators are allowed on the exam. Contact me **before** missing an exam if you have a critical emergency. No make-up exams are allowed without prior consent. If you do not inform me that you will be missing an exam beforehand, you will get a zero on that exam. Practice questions will be posted on Canvas in advance of the exam designed to help you identify topics that you need to study further.

Lab Assignments: Each lab assignment is a write up that outlines your completion of the lab. Please submit your lab write up using either a PDF or Microsoft Word (DOCX) file. You may not submit an Microsoft Excel booklet (XLSX) file as your lab submission. Each lab has a guided section and an application section. You must first complete the guided section and provide ample proof that you completed the guided portion by providing screenshots or Excel code when prompted. 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 screencaps. 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. Up to one lab assignment will be accepted late with a 10% penalty. 30 minutes of class time is designated to help you get started on each lab assignment. Please bring your laptop to class on those days.

Achieve: Achieve by Macmillan allows you to access the textbook, statistical applets, and other publisher resources. Your online homework problems are assigned in Achieve.

Online Homework: The homework is designed to allow you to grasp the concepts of statistics; it is not an end in itself. The online homework will synchronize with Canvas in the appropriate module. It is your responsibility to check for any issues with the Achieve submission, as your assignment will be treated as missing if the virtual submission is not made. Homework is scored on a combination of completeness and correctness. If you get at least a 90% on the online homework, you will get full points. I encourage you to help one another with homework, but directly copying an online source or another student's homework assignment is considered plagiarism and will not be tolerated. The lowest homework score will be dropped.

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 activity credit for your attendance by using the sign-in sheet. Each class we will work on a class 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. These may be fully graded or you may get credit for completion, depending on the activity.

Achieve: Achieve by Macmillan allows you to access the textbook, statistical applets, and other publisher resources.

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 Accomodations 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 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 special accommodations.

Sources of Help: If you find yourself struggling, consider asking for help using any of the following:

1. Your Professor. If you have questions, email me, ask in class, or come to my office hours.
2. Other classmates. Form study groups and work together both in and out of class.
3. Tutoring. Available in Rohr Science through the Tutoring Center whose hours will be posted on Canvas.
4. Online resources. Accessible on Canvas, or find them yourself via YouTube, Khan Academy, etc.
5. Practice exam questions. Look at them ahead of time and use them to assess your understanding.

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/18i1pUoY0iCfB8w7JKxVvACQW309X-JRB/edit?usp=sharing&ouid=116164865489739533893&rtpof=true&sd=true

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

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
5/12/2025	5/13/2025	5/14/2025	5/15/2025	5/16/2025	5/17/2025
Mandatory Zoom	*Online Vids Ch4-5*	**Mandatory**	*Online Vids Ch6, Lab 2*	*Online Vids Ch6-9*	*Catch Up On Lecture Videos & Homework*
Online Vids Ch1-2	*Work On Lab 1*	**Zoom Meeting**	Optional Zoom OH	*Work on OHW & Lab*	
✓ Register Achieve ✓	✓ OHW Ch1-2 ✓	✓ CA#1, Lab1 ✓	✓ OHW Ch4-5 ✓	✓ Video Notes ✓	✓ OHW Ch6-9, Lab2 ✓
5/19/2025	5/20/2025	5/21/2025	5/22/2025	5/23/2025	5/24/2025
Online Vids Ch3	*Online Vids Ch15*	**Mandatory**	*Online Vids Ch16, Lab 4*	*Online Vids Ch17-18*	*Catch Up On Lecture Videos & Homework*
Work on Lab 3	Optional Zoom OH	**Zoom Meeting**	Optional Zoom OH	*Work on OHW & Lab*	
✓ Video Notes ✓	✓ OWH Ch3 ✓	✓ CA#2, Lab3 ✓	✓ OHW Ch15 ✓	✓ Video Notes ✓	✓ OHW Ch16, Lab4 ✓
5/26/2025	5/27/2025	5/28/2025	5/29/2025	5/30/2025	5/31/2025
No Class	*Study Ch1-9, Ch15-18*	**Midterm Exam**	*Online Vids Ch20, Lab 5*	*Online Vids Ch21*	*Catch Up On Lecture Videos & Homework*
	Optional Zoom OH		Optional Zoom OH	*Work on OHW & Lab*	
Memorial Day	✓ OHW Ch17-18 ✓	**In Zoom**	✓ Video Notes ✓	✓ OHW Ch20 ✓	✓ OHW Ch21, Lab5 ✓
6/2/2025	6/3/2025	6/4/2025	6/5/2025	6/6/2025	6/7/2025
Online Vids Ch27	*Work on OHW & Lab*	**Mandatory**	*Online Vids Ch22, Lab 7*	*Online Vids Ch23*	*Catch Up On Lecture Videos & Homework*
Work on Lab 6	Optional Zoom OH	**Zoom Meeting**	Optional Zoom OH	*Work on OHW & Lab*	
✓ Video Notes ✓	✓ OHW Ch27 ✓	✓ CA#3, Lab6 ✓	✓ Video Notes ✓	✓ Video Notes ✓	✓ OHW 22-23, Lab7 ✓
6/9/2025	6/10/2025	6/11/2025	6/12/2025	6/13/2025	*No Class*
Online Vids Ch25	*Study Ch20-27*	**Mandatory**	**Final Exam**	*No New Assignments*	
Work On Lab 8	Optional Zoom OH	**Zoom Meeting**			*You Finished!*
✓ Video Notes ✓	✓ OHW 25 ✓	✓ Class Activity #4 ✓	**In Zoom**	✓ Lab8 ✓	