

Measurement, Statistics, and Evaluation of Human Performance [online]

Meeting Days:	Online	Instructor:	Jacob R. Goodin, PhD, CSCS
Meeting Times:	Online	Phone:	Email to set up a phone meeting
Meeting Location(s):	Online	Email:	jgoodin@pointloma.edu
Final Exam:	Due Fri 12/17, at 11:59pm	Office Hours:	Sign-up link in Canvas

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

Study of measurement techniques and instruments, descriptive and inferential statistics and evaluation procedures in human performance. Principles and techniques of construction, organization, administration, and interpretation involved in human performance research. Includes critical evaluation of data using basic statistical techniques and an evaluation of research design in human performance- related studies.

COURSE LEARNING OUTCOMES

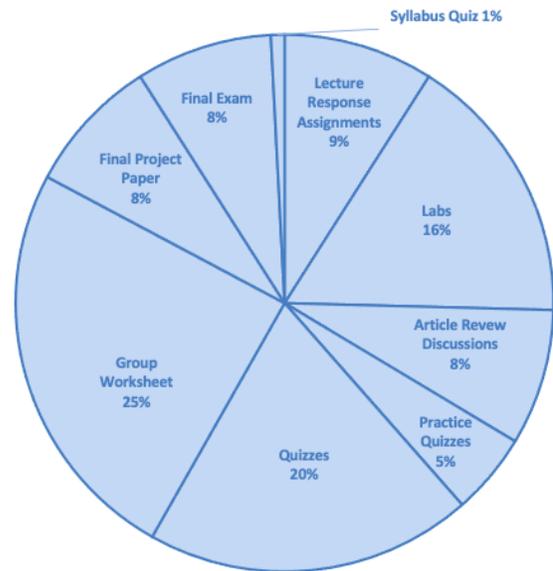
- Identify the basic concepts of measurement, testing, and evaluation in exercise science & sport science
- Describe important issues related to the ethical use of human subjects in research and the role of the institutional review board in protecting them.
- Apply basic statistical procedures in data analysis, utilize Excel and SPSS for statistical analyses and be able to accurately interpret the output
- Apply basic quantitative statistical procedures in data analysis including descriptive statistics, chi-square, t-tests, correlation, regression, and 1- and 2-way ANOVA with post-hoc tests.
- Define and differentiate the concepts and types of reliability, objectivity, and validity used to evaluate norm-referenced and criterion-referenced data
- Construct sound methodology to address a research question
- Collect and interpret data based on a sound methodology that addresses a well-constructed research question
- Use descriptive and inferential statistics to make decisions.

COURSE GRADING AND ASSIGNMENTS

Syllabus Quiz	5 pts
Lecture Responses	11x5 pts
Labs	5x20 pts
Article Review Discussions	5x10 pts
Practice Quizzes	6x5 pts
Quizzes	6x20 pts
Group Worksheets	10x15 pts
Final Paper: Literature Review	50 pts
Final Exam	50 pts

Total: 970 pts

Student grades will be posted in the Canvas grade book no later than midnight on Tuesday of each week beginning in Week Two of this course. It is important to read the comments posted in the grade book as these comments are intended to help students improve their work. Final grades will be posted within one week of the end of the class. The final grade percentage will be rounded to the nearest percent with grades being recorded as follows:



Grade	Percent	Grade	Percent	Grade	Percent
A	93 - 100	B-	80 - 82.9	D+	67 - 69.9
A-	90 - 92.9	C+	77 - 79.9	D	63 - 66.9
B+	87 - 89.9	C	73 - 76.9	D-	60 - 62.9
B	83 - 86.9	C-	70 - 72.9	F	0 - 59.9

EDUCATIONAL OPPORTUNITIES

Note: All assignments are to be submitted electronically via Canvas by Saturday at 11:59pm unless otherwise noted. The only exception are the initial posts for discussions, which are due on Wednesdays at 11:59pm.

- 1) **Lecture Responses:** The lecture videos are created to give you an overview or sometimes a deeper look into concepts that you find in the textbook reading. Earn participation points by "Liking" the video and then leaving a comment to let me know you watched it (you have to be signed in to your YouTube, Google, or Gmail account for this to work). Your comment can be a 1-2 sentence executive summary, a thoughtful question, or funny comment relevant to the video or topic discussed. In addition to your comment, feel free to upvote other's comments that you related to, laughed at, or that you found yourself asking the same question.

At the end-screen of the video, click on the link to be taken to the next video in the sequence without needing to leave YouTube.

Don't forget to subscribe to the channel so you're alerted when new videos are added.

- 2) **Labs:** The purpose of the lab assignments is to give students an opportunity to answer common kinesiology questions using statistical analyses and realistic datasets. Each lab will contain a prompt that frames the scenario and outlines the specific research questions. In addition, a dataset along with a series of follow-up questions will guide your analysis. These labs should be completed in your teams, using the lecture videos, textbook, and PowerPoint slides as your guide. The professor will be available to consult during office hours for help as well.
- 3) **Article Review Discussions:** An almost bi-weekly discussion with the initial post due by Wednesday at 11:59pm and responses due by Saturday at 11:59 pm. Students will choose one of the peer-reviewed research articles posted on the discussion board prompt to read. They will then write a 1-paragraph "micro essay" that sufficiently answers the prompt by Wednesday of the week it is posted. Students will then have 3 days (Thursday through Saturday) to engage with their peers' posts. Further details will be outlined in each discussion prompt on Canvas.
- 4) **Group Worksheets:** These worksheets will be completed weekly (exceptions noted in schedule), and cover topics discussed in the weekly chapter reading and video lectures. You are encouraged to work on these in your teams, and to assist one-another in understanding the concepts. You are furthermore encouraged to sign up for office hours with the professor to discuss questions that arise after attempting the problems on your own, consulting the textbook, and watching the video lectures.
- 5) **Practice Quizzes:** These quizzes can be taken at any point during the second week of the module.
 - The practice quizzes will be timed (increased to 30 minutes automatically to accommodate all learning plans), but each person can take 3 attempts with the highest score saved. Make sure you've studied and have done the reading first!
 - For the practice assessments only, you may communicate with team members via Zoom (or some other app). I recommend waiting until each person is logged into the Zoom meeting before starting the quiz. The best learning outcomes are achieved if you use this as an opportunity to contribute to the peer-to-peer learning community that hopefully develops amongst your team members.
- 6) **Quizzes:** Thursday through Saturday in the second week of each module a Canvas quiz monitored by HonorLock will be open for you to complete. These assessments are designed to provide you and your professor with feedback on your understanding and mastery of the course content from the previous two weeks.
 - The assessments will be available for 3 days (Thursday through Saturday).

- The assessment is timed (increased to 30 minutes automatically to accommodate all learning plans), and questions are in random order.
- Please do not discuss the contents of these assessments with your peers (unlike the practice assessments).
- You will need to take these assessments on a laptop equipped with the Chrome browser and a webcam, in a clean workspace, with no other devices or people present.

- 7) **Small Literature Review Paper:** The Small Literature Review will test your ability to understand applied research as it relates to an area of interest, and is intended to serve as a culminating research experience similar to those encountered at the graduate level. Student teams will choose a topic of interest and complete a narrative literature review, with opportunities throughout the process to receive feedback. More details as well as paper guidelines can be found in Canvas.
- 8) **Final Exam:** The cumulative final exam will be in the form of a Canvas quiz monitored by HonorLock. Questions will be presented in multiple choice format similar to the bi-weekly module quizzes. The final exam is intended to hold students reasonably accountable to the concepts learned throughout the course.
- 9) **Textbook Reading:** Regular reading chapters will be assigned from the textbook in order to be prepared to engage virtually with your peers and to understand the material.

REQUIRED TEXTS AND RESOURCES

TEXTBOOK:

Weir, J. P., & Vincent, W. J. (2020). Statistics in kinesiology. Human Kinetics Publishers.
Purchase here: <https://amzn.to/3swifds>

SOFTWARE:

JASP Statistics Program (Version 0.13. 1).

Download for free here: <https://jasp-stats.org/download/>

SPSS Statistics Program (Version 27.0).

Students are able to access SPSS by going to view.pointloma.edu and signing in with their PLNU username and password. From there, SPSS should be available in a folder called "IBM SPSS Statistics" after clicking the Windows button on the bottom right corner of the screen.

For help accessing SPSS, read the article below (sign in with PLNU credentials):

<https://help.pointloma.edu/TDClient/1808/Portal/KB/ArticleDet?ID=102257>

Students can also go directly to the help.pointloma.edu site and under the Knowledge Base Tab, there is a section called "Learning Remotely" that contains an article with instructions on how to access the Virtual Desktop.

In addition to the above textbook and software, for this online course you will need access to the following:

- Zoom: <https://zoom.us/>
 - Sign up for a free account using your PLNU email address. Download the app to your laptop, phone, and/or tablet.
- Google Drive: <https://www.google.com/drive/>
 - You already have a free account associated with your PLNU email address. In this class we will use the browser-based document functionality.
- Google Chrome: <https://www.google.com/chrome/>
 - Google Chrome is the required browser for HonorLock, and must be downloaded and used on a laptop or desktop for the module quizzes, midterm, and final exam.
- Laptop or desktop computer equipped with a microphone and webcam

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 an estimated 112.5 total hours meeting the course learning outcomes. The time estimations are provided in the Canvas modules.

LATE AND INCOMPLETE ASSIGNMENTS

All assignments are to be submitted/turned in according to the specified time in Canvas. Late assignments/quizzes will be docked 20% per day, with assignments/quizzes submitted over 5 days late receiving a 0. Completes will only be assigned in extremely unusual circumstances.

FINAL EXAMINATION POLICY

Successful completion of this class requires completing the final examination online using HonorLock by the date specified in Canvas.

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.

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.

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.

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 percent of class sessions (virtual or face-to-face), 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. 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 and accessing Canvas materials regularly. 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.

Asynchronous Attendance/Participation Definition

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.

TUTORING

The PLNU Tutorial Center is available free of charge for all current, undergraduate PLNU students. It offers tutoring for most subjects, as well as for general help with paper editing, study skills, etc. The Tutorial Center is located on the south end of Bond Academic Center, next to the Study Abroad offices. Tutoring is available over the phone at (619) 849 2593, or via email at TutorialServices@pointloma.edu.

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](#).

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, microphone, or webcams compatible with their computer available to use. Please note that any course with online proctored exams require a computer with a camera (tablets are not compatible) 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.

OFFICE HOURS

It is important to me that I get to know each of you on an individual level, therefore I will be posting virtual office hours via the Zoom virtual conferencing app. I will send out more details on this soon. I have an open-door policy for questions, nerdy training theory discussions, or if you just need someone to listen and pray for you. I often won't have all the answers, but I'm positive we can figure it out together!

Tentative Semester Schedule & Module Setup

Due Date: Saturdays @11:59 pm

Module	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Module 1 (wk 1-2)	8/30	8/31	9/1	9/2	9/3	9/4	9/5	9/6	9/7	9/8	9/9	9/10	9/11	9/12
Intro to Measurement, Stats, & Research; Percentiles & Central Tendency Ch. 1-4	Video Lecture Response						Rest	Video Lecture Response						
	Group Worksheet Assignment							Group Worksheet Assignment						
	Discussion Post 1			Discussion Response 1				Lab 1						
	Syllabus Quiz							Practice Quiz & Module Quiz						
Module 2 (wk 3-4)	9/13	9/14	9/15	9/16	9/17	9/18	9/19	9/20	9/21	9/22	9/23	9/24	9/25	9/26
Variability, Normal Curve, & Sampling Error Ch. 5 & 6	Video Lecture Response						Rest	Video Lecture Response						
	Group Worksheet Assignment							Group Worksheet Assignment						
	Discussion Post 2			Discussion Response 2				Lab 2						
								Practice Quiz & Module Quiz						
Module 3 (wk 5-6)	9/27	9/28	9/29	9/30	10/1	10/2	10/3	10/4	10/5	10/6	10/7	10/8	10/9	10/10
Fundamentals of Statistical Inference ch. 7	Video Lecture Response						Rest	Zoom check-ins w/groups						
	Group Worksheet Assignment							*no group worksheet this week*						
	Discussion Post 3			Discussion Response 3				*no lab this week*						
								Practice Quiz & Module Quiz						
Module 4 (wk 7-8)	10/11	10/12	10/13	10/14	10/15	10/16	10/17	10/18	10/19	10/20	10/21	10/22	10/23	10/24
Correlation & Regression ch. 8 & 9	Video Lecture Response						Rest	Video Lecture Response						
	Group Worksheet Assignment							*no group worksheet this week*						
	Discussion Post 4			Discussion Response 4				Lab 3						
								Practice Quiz & Module Quiz						
Module 5 (wk 9-10)	10/25	10/26	10/27	10/28	10/29	10/30	10/31	11/1	11/2	11/3	11/4	11/5	11/6	11/7
t-Tests ch. 10	Video Lecture Response						Rest	Video Lecture Response						
	Group Worksheet Assignment							Group Worksheet Assignment						
	Discussion Post 5			Discussion Response 5				Lab 4						
								Practice Quiz & Module Quiz						
Module 6 (wk 11-12)	11/8	11/9	11/10	11/11	11/12	11/13	11/14	11/15	11/16	11/17	11/18	11/19	11/20	11/21
Analysis of Variance ch. 11	Video Lecture Response						Rest	Video Lecture Response						
	Group Worksheet Assignment							Group Worksheet Assignment						
	no discussion this week							Lab 5						
								Practice Quiz & Module Quiz						
Module 7 (wk 13-14)	11/22	11/23	11/24	11/25	11/26	11/27	11/28	11/29	11/30	12/1	12/2	12/3	12/4	12/5
Small Literature Review	Group Zoom Meetings w/Dr. Goodin						Rest	Group Zoom Meetings w/Dr. Goodin						Rest
Module 8 (wk 15)	12/6	12/7	12/8	12/9	12/10	12/11	12/12	12/13	12/14	12/15	12/16	12/17	12/18	12/19
Exam Review & Lit Review Help	Small Literature Review Due (Sat @ 11:59p)						Rest	Final Exam						Rest

End of Semester: Final Exam Due BEFORE Fri, 12/17 @11:59pm