

Point Loma Nazarene University

Mathematical, Information and Computer Sciences

MTH4151 Data Science Project II

Number of Units 1

Hybrid with 7 In-Person Meetings (See Calendar Below - 2:30-3:30 in Dr. Zack's Office RS246)

Spring 2024

	Meeting Information	Assignment Due
	Meeting Class Overview	
10-Jan	Discuss the Project Steps	
17-Jan		Question Posed
24-Jan		Question Adjusted Based on Feedback
31-Jan	Meeting	Data Identified and Any Question Modification
7-Feb	Meeting	Data Loaded and Check Statistics Run
14-Feb		
21-Feb		
28-Feb	Meeting	Data Analysis Progress Report #1
6-Mar	Spring Break	
13-Mar	Meeting	Data Analysis Progress Report #2
20-Mar		
27-Mar		
3-Apr	Meeting (on Zoom)	Zoom (at ABET): Data Analysis Progress Report #3
10-Apr		Paper Outline
17-Apr		
24-Apr	Meeting	Final Paper and Discussion of Findings
Finals Week		Ethics Assignment

Instructor: Dr. Maria Zack
Phone: 619.849.2458
Email: mzack@pointloma.edu
Office hours: On Zoom - Click here for appointment (Links to an external site.) These are the times that I work to hold open for appointments. If none of them work you can email me to see if we can find another time. Please note that some sessions are Zoom only and

are shown with the statement "Zoom only" after the time. The others can be Zoom or In-Person (RS246).

Monday 10:30-11:30 AM

Tuesday 8:00-9:30 AM and 2:00-3:00 PM

Wednesday By appointment only

Thursday 5:00-6:00 PM (Zoom only)

Friday 11:15 AM - 12:00 PM

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.

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

MTH 4151 Data Science Project II (1 Unit)

This course is a continuation of MTH 4142. Students will complete the project begun in MTH 4142 and present their results.

Prerequisite(s): MTH 4142

COURSE LEARNING OUTCOMES

1. Students will be able to apply their technical knowledge to solve problems.
2. Students will be able to speak about their work with precision, clarity and organization.
3. Students will be able to write about their work with precision, clarity and organization.
4. Students will collaborate effectively in teams.

5. Students will be able to gather relevant information, examine information and form a conclusion based on that information.
6. 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.

REQUIRED TEXTS AND RECOMMENDED STUDY RESOURCES

There is no textbook for this class.

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 2 unit class delivered over fifteen weeks. Specific details about how the class meets the credit hour requirement can be provided upon request. (Based on 37.5 hours of student engagement per credit hour.)

Distribution of Student Learning Hours

Category	Time Expectation in Hours
Project Meetings	7
Project Preparation	8
Data Analysis	22
Writing Paper and Ethics Assignment	5
Total Hours	42

ASSESSMENT AND GRADING

Graded Components

- **Project Design:** This is the first phase of the project which will include identifying a question that you want to answer, identifying the data that can assist in answering the question and getting the data to load in the tool(s) that you will be using to analyze the data.
- **Project Check Points and Deliverables:** In this second phase you will be analyzing the data and providing me with progress reports (PowerPoint presentations and demos of findings from the data along with challenges encountered in the analysis process.
- **Final Project Paper:** You will write a (brief) paper that provides information about your data, your methodology for analyzing the data and your conclusions. *This should include references to articles, books and websites that you have used to acquire the data,*

analyze the data, and make meaning from the data. I will provide you with an outline for the paper and we will discuss it in advance.

- **Ethics Assignment:** There will be an assignment due at the end of the semester that will ask you to consider some of the ethical issues that are inherent in the process of gathering and analyzing data.
- **Examinations and the Final Examination.** There are no examinations in this class.
- **Late work will not be accepted** without prior consent or a well-documented emergency.

Grading Distribution	Percent
Project Design	20
Project Check Points and Deliverables	50
Final Paper	20
Ethics Assignment	10
Total	100

Grading Scale

Approximate minimal percentages required to obtain a given grade are:

Standard Grade Scale Based on Percentages					
	A	B	C	D	F
+		87.5- 90	77.5-80	67.5-70	
	92.5 -100	82.5-87.5	72.5-77.5	62.5 -67.5	0-60
-	90-92.5	80-82.5	70-72.5	60-62.5	

INCOMPLETES AND LATE ASSIGNMENTS

All assignments are to be submitted/turned in by the beginning of the class session when they are due—including assignments posted in Canvas. Incompletes will only be assigned in extremely unusual circumstances.

CLASS ENROLLMENT

It is the student's responsibility to maintain his/her class schedule. Should the need arise to drop this course (personal emergencies, poor performance, etc.), the student has the responsibility to follow through (provided the drop date meets the stated calendar deadline established by the university), not the instructor. Simply ceasing to attend this course or failing to follow through to arrange for a change of registration (drop/add) may easily result in a grade of F on the official transcript.

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 you have questions, a desire to meet with the chaplain or have prayer requests you can contact your professor or the [Office of Spiritual Life and Formation](#).

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 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 PoliciesLinks to an external site.](#) for definitions of kinds of academic dishonesty and for further policy information.

ARTIFICIAL INTELLIGENCE (AI) POLICY

Use of Artificial Intelligence (AI) tools (e.g, ChatGPT, iA Writer, Marmot, Botowski) in creating written work for this class is not permitted, and use of these tools will be treated as plagiarism.

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.

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.

You may report an incident(s) using the [Bias Incident Reporting Form](#)[Links to an external site.](#).

SEXUAL MISCONDUCT AND DISCRIMINATION

In support of a safe learning environment, 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 accommodations and resources are available through the Title IX Office at pointloma.edu/Title-IX. Please be aware that under Title IX of the Education Amendments of 1972, faculty and staff are 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 at pointloma.edu/title-ix.

PLNU ATTENDANCE AND PARTICIPATION POLICY

Regular and punctual attendance at all class sessions is considered essential to optimum academic achievement. 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 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. 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.

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.

LOMA WRITING CENTER

The Loma Writing Center exists to help all members of the PLNU community cultivate transferable writing skills to engage their academic, professional, personal, and spiritual communities. We work toward this goal by conducting one-on-one consultation sessions, supporting writing education across the PLNU community, and participating in ongoing writing center research.

Getting feedback from the Loma Writing Center while you're in the process of working on an assignment is a great way to improve the quality of your writing and develop as a writer. You are encouraged to talk with a trained writing consultant about getting started on an assignment, organizing your ideas, finding and citing sources, revising, editing for grammar and polishing final drafts, and more. For information about how to make in-person or online appointments, see [Loma Writing Center webpage](#) or visit the Loma Writer Center on the first floor of the Ryan Library, room 221.

Course Summary:

Date	Details	Due
Wed Jan 17, 2024	Assignment Identifying Your Question	due by 2pm
Wed Jan 24, 2024	Assignment Modifying Your Question	due by 2pm
Wed Jan 31, 2024	Assignment Identifying the Data Source	due by 2pm
Wed Feb 7, 2024	Assignment Data Loading and Basic Checks	due by 2pm
Wed Feb 28, 2024	Assignment Data Analysis Progress Report #1	due by 2pm
Wed Mar 13, 2024	Assignment Data Analysis Progress Report #2	due by 2pm
Wed Apr 3, 2024	Assignment Data Analysis Progress Report #3	due by 2pm
Wed Apr 10, 2024	Assignment Paper Outline	due by 2pm
Wed Apr 24, 2024	Assignment Final Paper	due by 2pm
Wed May 1, 2024	Assignment Ethics	due by 11:59pm