



MICS/Point Loma Nazarene University

MTH 4092 Special Topics In Mathematics

2.0 Units

Fall 2023 | T & TH 10:00- 10:55

Meetings: Tuesday & Thursdays 10:00 – 10:55	Instructor: Dr. Catherine Crockett
Location: RS 365	Phone: 619.849.2723
Portfolios are due 10/24 & 12/05	Email: catherinecrockett@pointloma.edu
Presentations 10/24 & 12/12 (final exam at 10:30 - 1:00)	Office Hours: MTWTF: 11-12, Tue & Thurs 1-3 or by appointment.
More course information in Canvas	Office: RS 222

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

Study of an area of mathematics not otherwise included in the curriculum. The needs and interests of students and faculty involved determine the topics.

COURSE LEARNING OUTCOMES

- Students will be able to apply their mathematical knowledge to solve problems.
- Students will be able to use technology to solve problems
- Students will be able to speak about their work with precision, clarity and organization.
- Students will be able to write about their work with precision, clarity and organization.
- Students will collaborate effectively in teams.

REQUIRED TEXTS AND RECOMMENDED STUDY RESOURCES-

None- just curiosity

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.)

ASSESSMENT AND GRADING**Graded Components**

Portfolios: Student portfolio will be collected twice and graded twice. Portfolios will contain the weekly assignments. Portfolios will be graded on the individual assignments and overall organization. Please see rubrics in Canvas.

Presentations: There are two presentations in this course- one mid semester and the other for the final exam. Grade for these presentations will be based on content, presentation, and attendance of other student's presentations. Please see the rubric in Canvas.

Paper: Each students needs to write a paper based on the topic they chose to do their final presentation on.

Please note: In order to pass this course, a student needs to earn a passing grade on the final presentation and paper.

Late Submission Penalties: The Portfolios demonstrate your understanding of the topics in the course. The Mid Semester Portfolio will be submitted on or before Tuesday, October 24, 2023. The completed portfolio (Final Portfolio) will be submitted on or before Tuesday, December 5, 2023. Late submission of a portfolio will be assessed a $2^{n-1} \times 10\%$ deduction where n = the number of weekdays late. The day counter for late work begins at the start of class on the weekday it is due. For example, a portfolio submitted at 11:00 on the first weekday after the due date will incur a two-day late penalty deduction of 20%.

Successful completion of this class requires taking the final examination on its scheduled day. The final examination schedule is posted on the [Class 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.

Grading Distribution	Percent
Mid Semester Portfolio	20
Final Portfolio	30
Mid Semester Presentation	15
Final Presentation	25
Final Paper	10
Total	100

Grading Scale

Grades are based on the number of points accumulated throughout the course with the following exception. A student must pass at least one of Exam 1, Exam 2, Exam 3 or the Final Exam in order to pass the class. That is, a score of 60% must be achieved on one of the Exams, or else the final grade will be an F regardless of all other point totals. 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	

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.

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.

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.

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

Attendance is expected at each class session. In the event of an absence, you are responsible for the material covered in class and the assignments given that day.

Regular and punctual attendance at all classes is considered essential to optimum academic achievement. If the student is absent from more than 10 percent of class meetings, the faculty member can file a written report which may result in 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. See the Undergraduate Academic Catalog [Class Attendance](#).

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

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 at <http://pointloma.edu/Title-IX>. 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 <mailto:counselingservices@pointloma.edu> or find a list of campus pastors at <http://pointloma.edu/Title-IX>.

Tentative Schedule:

week	Tuesday	Thursday
1 8/28 – 9/1	8/29 Introduction Essay on Art & math	8/31 Tape activity Meet in front of the library
2 9/04-9/09	9/05 Lines & perspective	9/07 Lines & perspective
3 9/11-9/15	9/12 Lines & perspective	9/14 Artistic application of rules for drawing images of parallel lines
4 9/18- 9/22	9/19 Artistic application of rules for drawing images of parallel lines	9/21 Plain views & viewing distances
5 9/25-9/29	9/26 Plain views & viewing distances	9/28 Plain views & viewing distances
6 10/02- 10/06	10/03 Fractals- Introduction & math behind them	10/05 Fractals- Introduction to math behind them
7 10/09- 10/13	10/10 Fractal project	10/12 Fractal project
8 10/16- 10/20	10/17 Work on Presentations & portfolio	10/19 No classes Fall Break Day
9 10/23- 10/27	10/24 Mid Semester Portfolios due & Midsemester Presentations	10/26 Introduction to symmetry & the mathematics behind
10 10/30 - 11/03	10/31 The mathematics behind symmetry	11/02 Symmetry project
11 11/06- 11/10	11/07 Symmetry project	11/09 Introduction to Origami
12 11/13- 11/17	11/14 Origami & math	11/16 Origami & math
13 11/20- 11/24	11/21 Origami projects	11/23 No Class Thanksgiving Break
14 11/27- 12/01	11/28 Origami projects	11/30 Work on Portfolio, Presentation or Paper
15 12/04- 12/08	12/05 Final Portfolio Due	12/07 Work on Student Presentation or Paper
Finals week 12/11- 12/15	12/12 Final Exam 10:30-1:00 Final Presentations & Final Paper	12/14

