

Point Loma Nazarene University
Math 352 History of Mathematics (2 credits)
Spring 2019
Mathematical, Information and Computer Sciences

Time and Place: MWF 8:30-9:25 a.m.

Instructor: Maria Zack, Ph.D.

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Office Number: Rohr Science 246

Office Hours:	
Monday	3:00-4:00 p.m.
Tuesday	By appointment
Wednesday	1:30-2:30 p.m.
Thursday	7:00-8:00 a.m.
Friday	3:00-4:30 p.m.

These are the hours that I will definitely be available. You can come by my office any time and if I am free I will help you. If you need a quick response or want to reserve a time just for you, you can send me email (I check it very regularly). If you have a question or just want to hang out, come by my office.

Text: *Journey through Genius* by William Dunham

Content:

This is a course is designed to give an overview of the history of mathematics. The focus of the course will be the time from the earliest development of mathematics up through the development of calculus (early 18th century). Some attention will be given to modern mathematics and the non-traditional mathematics of underrepresented peoples.

Catalog Description:

Development of mathematics from pre-Greek to recent times. Perspectives and contributions of persons from diverse cultural, ethnic, and gender groups. Impact of culture on mathematical progress.

Learning Outcomes:

- Students will be able to write proofs.
- Students will be able to demonstrate facility with analytical concepts.
- Students will be able to demonstrate facility with algebraic structures.
- Students will be able to speak about their work with precision, clarity and organization.
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- Students will collaborate effectively in teams.
- Students will be able to identify, locate, evaluate, and effectively and responsibly use and cite information for the task at hand.
- Students will be able to gather relevant information, examine information and form a conclusion based on that information.

The best way to **learn** mathematics is by **doing** mathematics. We will be discussing the history of mathematics but we will also be doing problems using methods from the past.

Grading:

Grades are based on the total number of points accumulated throughout the course. The points for each activity are:

Homework	300
Mid-term Project	200
Timeline	200
Final Project	300
Total Points	1000

Approximate minimal points required to obtain a given grade are:

	A	B	C	D
+	(875, 900)	(775, 800)	(675, 700)	
[925, 1000]	[825, 875]	[725, 775]	[625, 675]	
-	[900, 925)	[800, 825)	[700, 725)	[600, 625)

Note that scores of 599 or lower will result in an F.

Homework:

Homework will be assigned each day at the end of class. All homework assigned in a week will be **due in class** the next Friday. No late homework will be accepted except by prior arrangement or with a documented emergency. Homework assignments are posted in Canvas. The object of the homework is to learn how to do the problems so I expect to see calculations on your homework using the terminology and methods of the class and not just the answer. A random selection (the same for all people) of the problems will be graded on any homework assignment.

Mid-term Group Project:

This project will focus on the period of 200-1400 AD. You will be asked to choose a particular mathematical topic to research and present. This project will be done in groups and your presentations will be approximately 5 minutes and will be given in class on the day listed in the schedule.

Timeline:

Students will be required to create a “mathematical” timeline based on reading in the text and the mid-term presentations. Each mathematical event/person should be recorded with a date and a one to two sentence summary of the event (e.g. “The Elements was published”). This timeline should also include at least five major events from general history for each century. If you stay on top of this and do it weekly, it should be no problem. The timeline will be due the last day of class.

Final Project:

You will be given a list of books of mathematical biographies and popular writing on mathematics. You will need to select one book, read it, write a paper on it and give a 7-10 minute presentation during the time of the final. **The final is FRIDAY MAY 3, 7:30-10:00 A.M.**

Final Exam Date and Time:

The final exam date and time is set by the university at the beginning of the semester and may not be changed by the instructor. This schedule can be found on the university website and in the course calendar. No requests for early examinations will be approved. Only in the case that a student is required to take three exams during the same day of finals week, is an instructor authorized to consider changing the exam date and time for that particular student.

University 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 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.

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.

Attendance:

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.

Academic Accommodations:

While all students are expected to meet the minimum standards for completion of this course as established by the instructor, students with disabilities may require academic adjustments, modifications or auxiliary aids/services. At Point Loma Nazarene University (PLNU), these students are requested to register with the Disability Resource Center (DRC), located in the Bond Academic Center.

(DRC@pointloma.edu or 619-849-2486). The DRC's policies and procedures for assisting such students in the development of an appropriate academic adjustment plan (AP) allows PLNU to comply with Section 504 of the Rehabilitation Act and the Americans with Disabilities Act. Section 504 (a) prohibits discrimination against students with special needs and guarantees all qualified students equal access to and benefits of PLNU programs and activities. After the student files the required documentation, the DRC, in conjunction with the student, will develop an AP to meet that student's specific learning needs. The DRC will thereafter email the student's AP to all faculty who teach courses in which the student is enrolled each semester. The AP must be implemented in all such courses.

If students do not wish to avail themselves of some or all of the elements of their AP in a particular course, it is the responsibility of those students to notify their professor in that course. PLNU highly recommends that DRC students speak with their professors during the first two weeks of each semester about the applicability of their AP in that particular course and/or if they do not desire to take advantage of some or all of the elements of their AP in that course.

Academic Honesty:

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 Honesty](#) for definitions of kinds of academic dishonesty and for further policy information.

Copyright Protected Materials:

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.

Credit Hour:

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 15 weeks. Specific details about how the class meets the credit hour requirements can be provided upon request.

Sources of Help:

1. The professors. If you have questions, ask us. See office hours.
2. Other classmates. Form study groups! Work together!
3. Drop in math tutoring. See the professors for the schedule for the Math Learning Center.

Some Tips About This Class:

This class moves very rapidly and covers a lot of material. For the best success in this class come to class regularly, stay current with your assignments (cramming won't help) and if you have a question **ASK**.

Monday	Tuesday	Wednesday	Thursday	Friday
NO CLASSES 7-Jan	NO CLASS 8-Jan	NO CLASS 9-Jan		Babylonian Numbers 11-Jan
	14-Jan	15-Jan NO CLASS	16-Jan	17-Jan NO CLASS 18-Jan
MLK DAY 21-Jan	22-Jan	Egyptian Geometry 23-Jan	24-Jan	25-Jan Teams work on Midterm Project Discuss Timeline
NO CLASS 28-Jan	29-Jan	Chapter 1 30-Jan	31-Jan	1-Feb Chapter 2
Chapter 3 Midterm Project Proposals Due	4-Feb	5-Feb Chapters 3 and 4	6-Feb	7-Feb NO CLASS 8-Feb
NO CLASS 11-Feb	12-Feb	Chapter 4 13-Feb	14-Feb	15-Feb Chapter 5
Chapter 5 and 6	18-Feb	19-Feb Chapter 6	20-Feb	21-Feb NO CLASS 22-Feb
Chapter 7	25-Feb	26-Feb Chapter 7	27-Feb	28-Feb NO CLASS 1-Mar
SPRING 4-Mar	5-Mar BREAK	SPRING 6-Mar	7-Mar BREAK	8-Mar SPRING
11-Mar Midterm Project Presentations	12-Mar	13-Mar Midterm Project Presentations	14-Mar	15-Mar NO CLASS
Chapter 8	18-Mar	19-Mar Chapter 8	20-Mar	21-Mar NO CLASS 22-Mar
Story of Maths (non-western)	25-Mar	26-Mar Final Project Check-in	27-Mar	28-Mar NO CLASS 29-Mar
Chapter 9	1-Apr	2-Apr Chapter 9	3-Apr	4-Apr NO CLASS 5-Apr
Chapter 10	8-Apr	9-Apr Chapter 10	10-Apr	11-Apr NO CLASS 12-Apr
Chapter 11	15-Apr	16-Apr Chapter 11	17-Apr	18-Apr EASTER 19-Apr
EASTER	22-Apr	23-Apr EASTER	24-Apr Chapter 12	25-Apr 26-Apr Chapter 12
	29-Apr	30-Apr	1-May	2-May 3-May FINAL EXAM 7:30-10:00 AM