



Math 44: Mathematics in Art, Culture, and Society
Winter 2025

Instructor: John Jimenez **Class :** T & Th 04:00p-06:15p in E31
Email: jimenezjohn@fhda.edu **Office hours:** M-Th 11:30a-12:30p in S55

Required Text and Recommended Materials:

- Reading Material
 - Lockhart, Paul. *A Mathematician's Lament*. Bellevue Literary Press, 2009.
 - Frenkel, Edward. *Love and Math: The Heart of Hidden Reality*. Basic Books, 2013.
 - O'Neil, Cathy. *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy*. Crown Publishing Group, 2016.
- Access to <https://deanza.instructure.com/>. Canvas is where all the course information will be available. Information regarding grades, lectures, resources, etc.

Course Goals:

This course is a survey of selected topics from contemporary and ancient mathematics, exploring the profound connections between mathematics and the real world, critically analyze the ethical implications of mathematical applications in society, and develop a deep appreciation for the beauty and creativity inherent in mathematics. It will familiarize students with a selection of introductory topics from symmetry; graph theory; chaos and fractals; topology; number theory; geometry; combinatorics and counting; the mathematics of social choice; data analysis, probability, and statistics; consumer mathematics and personal financial management.

Grading:

Exams	Homework	Group Project	Final
40 %	20 %	20 %	20 %

Grading scale	
90-99.9% A	70-77.9% C
88-89.9 % B+	68-69.9 % D+
80-87.9% B	60-67.9% D
78-79.9% C+	≤ 59.9 F

Exams 40 %: Three exams will be given throughout the quarter. See the schedule at the end of the syllabus for the dates of the exams. The lowest exam score will be dropped.

Exam 1: Jan 27th

Exam 2: Feb 24th

Exam 3: March 17th

Homework 20 %: Homework will be assigned at the beginning of each lecture week and will be due one week after it is assigned. The two lowest homework grades will be dropped.

Group Project 20 %: Once we have covered a decent amount of material in the course, there will be a group project assignment assigned. More details will be given closer to that date.

Final 20 %: The final for this course will be a two-hour cumulative exam. The final exam score will replace your lowest exam score. The final exam is on Thursday March 27th from 4:00 PM to 6:00 PM.

Assignment submission guidelines: All assignments will have due dates posted but in case of an emergency I will still accept your assignment if it is not completed by the due date. If for some reason you cannot turn in an assignment, reach out to me and turn it in as soon as possible without penalties.

Resources to Succeed in this Course:

- The MESA center located in S54 has drop-in tutoring that you should definitely make use of!
<https://www.deanza.edu/mesa/>
- Another great place to find tutors is in Math, Science & Technology Resource Center located in S43. <https://deanza.edu/studentssuccess/mstrc/>
- After-hours or weekend tutoring. See the [Online Tutoring](#) page for information about NetTutor (via Canvas) or Smarthinking (via MyPortal).
- Office hours! I encourage students to ask me any questions about the course content if they wish! You can reach me via [Zoom](#) in the times listed on the first page of the syllabus. This is another great place to get help on material related to the course.

It is known that students who participate in tutoring, group study, or workshops for three or more hours a week succeed at much higher rates than those who do not. The students who most need the help may be reluctant, but if you take the first step in seeking resources you will be glad you did.

Disability Statement: If you have a disability related need for academic accommodations or services in this course, you will need to provide me with a Test Accommodation Verification Form (TAV form) from Disability Support Services (DSS) or the Educational Diagnostic Center (EDC). Students are expected to give a two week notice if they are in need of accommodations. For those students with disabilities, you can obtain a TAV form from their DSS counselor (408 864-8753 DSS main number) or EDC advisor (408 864-8839 EDC main number). The application process can be found here: <https://www.deanza.edu/dsps/dss/applynow.html>

To protect students GPA, you may be dropped from the course if:

- You miss the first day of class.
- You do not complete the first week's assignments.
- You have multiple missing assignments.
- You do not interact with Canvas regularly to keep up with the course.
- You miss up to a week of class.

Note that if for any reason you feel like you may need to drop the course, it is your responsibility to do so.

Academic Integrity: If it is suspected that academic dishonesty is taking place on an assignment, the college will be notified and will result in a failing grade on the assignment or a failing grade in the class. For further information on academic integrity please see

https://www.deanza.edu/policies/academic_integrity.html.

Important Dates:

For a comprehensive list of important dates like the drop deadline (February 28 Last day to drop classes with a W) see <http://www.deanza.edu/calendar/>.

Course Description: Fundamentals of differential calculus. (5 units)

Student Learning Outcome(s):

- Analyze contemporary mathematical problems, apply problem solving techniques using a variety of methods, and communicate the results mathematically through a variety of forms.
- Demonstrate and correctly apply basic mathematical techniques in at least five of the following ten areas: symmetry, graph theory, fractals and chaos theory, topology, number theory, geometry, combinatorics, methods of social choice, probability and statistics, economics and personal finance.
- Examine and evaluate myths and realities about the contemporary discipline of mathematics and its practitioners.

Office Hours:

M,T,W,TH 11:30 AM 12:30 PM In-Person S55