



Math 44.27 – Mathematics in Art, Culture and Society

Winter 2024

Meets: TTh, 4:00 PM to 6:15 PM

Room: E31

Instructor: Lilit Mazmanyman	
Contact: mazmanymanlilit@fhda.edu	Office hours: Friday, 3:00 – 4:00 PM, online via Zoom (check Canvas course for instructions)

This class meets **on-campus** each week on scheduled days and times. Instructions to access Zoom for office hours can be found on our Canvas course, which is accessible to you via **MyPortal** as you are enrolled in the course. You can also access Canvas using direct link [Dashboard \(instructure.com\)](#) with your MyPortal login credentials. Information about Canvas can be found in Canvas on the Student Resources page: [Student Resources \(instructure.com\)](#). The Student Online Resources hub with extensive information and tips can be found at [Online Learning Resource Hub for Students \(deanza.edu\)](#).

Course Description

This course is a survey of selected topics from contemporary mathematics, including problem-solving techniques and connections between mathematics and culture. It includes 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.

Prerequisites

Intermediate algebra or equivalent (or higher), or appropriate placement beyond intermediate algebra. Advisory: ESL 272 and ESL 273, or ESL 472 and ESL 473, or eligibility for EWRT 1A or EWRT 1AH or ESL 5.

Textbook

E.B. Burger and M. Starbird, *The Heart of Mathematics, An Invitation to Effective Thinking*, 4th edition, publ. by Wiley, 2013.

Calculators

- Scientific or graphing calculator.
- You can use online calculator via website as DESMOS (<https://www.desmos.com>) or GeoGebra (<https://www.geogebra.org>) for the homework and group activities.

Homework (HW)	<ul style="list-style-type: none"> • HW will be assigned each week, but they will not be collected nor graded. • Quizzes and exams will include similar problems from your homework. • Ask your homework questions before quiz and exam.
Group Work and Discussions (GWD)	<ul style="list-style-type: none"> • Group work and discussions will be assigned randomly during class times. • GWD must be completed in groups of at least two and no more than four. • Topics and details will be discussed in class. • Work with details must be uploaded on Canvas as one document. • Due date will be announced in class.
Report and Presentation (RP)	<ul style="list-style-type: none"> • Each student must submit a report on contemporary or historical mathematical source. • Student must be ready to present the report orally.

	<ul style="list-style-type: none"> • It will be assigned in the second part of the quarter due end of the quarter. 																																						
Quizzes (Q)	<ul style="list-style-type: none"> • Quiz is closed book. • There are four quizzes based on classwork and homework problems. • One page of notes, HANDWRITTEN, (one side 8.5 x 11-inch) is allowed. • NO MAKE-UP QUIZZES are given. • Missed quiz is graded as a zero (0). • The lowest quiz score will be dropped. 																																						
Exams & Final Exam (EX,FE)	<ul style="list-style-type: none"> • There will be three (3) examinations. • Exams 1 & 2 are one hour each and Final exam is two hours. • Exam dates are on the course schedule. • Exams are closed book. • One sheet of notes (double-sided 8.5 x 11-inch), HANDWRITTEN, is allowed for the Exams 1 & 2. • Two sheets of notes (double-sided 8.5 x 11-inch), HANDWRITTEN, are allowed for the Final Exam. • Bring calculator, spare batteries, pencils, ruler, sharpener, and eraser. • There are NO MAKE-UP examinations. An absence from any examination earns a grade of zero (0). • You MUST take the final exam to pass the course. 																																						
Grading	<p>Students will be graded on group work and discussions (GWD), report and presentation (RP), quizzes (Q), and exams (EX1 & 2, FE).</p> <p>Distribution of weights for each category</p> <table border="1" data-bbox="431 1167 1149 1415"> <thead> <tr> <th>Category</th> <th>% Weight on Final Grade</th> </tr> </thead> <tbody> <tr> <td>Group Work and Discussions</td> <td>10 %</td> </tr> <tr> <td>Report and Presentation</td> <td>15 %</td> </tr> <tr> <td>Quiz</td> <td>15 %</td> </tr> <tr> <td>Exam 1</td> <td>20 %</td> </tr> <tr> <td>Exam 2</td> <td>20 %</td> </tr> <tr> <td>Final Exam</td> <td>20 %</td> </tr> </tbody> </table> <p>Grading Scale</p> <table border="1" data-bbox="431 1482 971 1621"> <tbody> <tr> <td></td> <td></td> <td>A</td> <td>94-100</td> <td>A-</td> <td>90-93</td> </tr> <tr> <td>B+</td> <td>87-89</td> <td>B</td> <td>83-86</td> <td>B-</td> <td>80-82</td> </tr> <tr> <td>C+</td> <td>77-79</td> <td>C</td> <td>70-76</td> <td>D</td> <td>60-69</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>F</td> <td><60</td> </tr> </tbody> </table> <p>Extra Credit During the course you will have opportunities for extra credits. There will be extra problems included in the coursework.</p>	Category	% Weight on Final Grade	Group Work and Discussions	10 %	Report and Presentation	15 %	Quiz	15 %	Exam 1	20 %	Exam 2	20 %	Final Exam	20 %			A	94-100	A-	90-93	B+	87-89	B	83-86	B-	80-82	C+	77-79	C	70-76	D	60-69					F	<60
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Important Dates and Deadlines

[Academic Calendar \(deanza.edu\)](http://deanza.edu)

Monday	January 8	First day of Winter Quarter 2024
Monday	January 15	Martin Luther King Jr. Holiday - no classes
Saturday	January 20	Last day to add classes
Friday	January 21	Last day to drop classes without a "W"
Friday-Monday	February 16-19	Presidents' Holiday - no classes
Friday	March 1	Last day to drop classes with a "W"
Thursday	March 28	Final examination

Online Education Center

- [Student Resource Hub](#): Visit this site for tips, guides and answers to your questions about using Canvas, Zoom and other online learning tools that your classes may be adopting.
- [Staying Organized](#): This webpage has advice for planning and staying on top of your online coursework.
- [Canvas Help](#): Need technical support with Canvas? This page has information on how to get help.
- [More Student Resources](#): Visit this page for more links and tips.

California Virtual Campus

- [Get Ready for Online Learning](#): This website has videos about getting "tech ready," managing your time, communicating with instructors and more.

Student services and support

<https://www.deanza.edu/online-spring/#Services>

- Tutoring and Library Help
- Computers and Tech Products
- Internet Access
- Food and Financial Assistance
- Health and Psychological Services

Attendance, Drops or Withdrawals

- Regular online attendance is essential for success in the course.
- You must not miss a class in the first week of the quarter or you will be dropped.
- A student who discontinues coming to class and does not drop the course will automatically receive a 'F' grade for the course.
- It is the student's responsibility to drop or withdraw from this course by the college deadlines.

Academic Honesty and Discipline Policy:

Students are expected to abide by the DeAnza College Code of Conduct and not participate in academic dishonesty.

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

Student Success Center

<http://deanza.edu/studentsuccess/mstrc/>

Hours of online Zoom Tutoring Center are Monday to Thursday 9:00-6:00 PM and Friday 9:00 AM-12:30 PM. The SSC provides free tutoring services such as individual, drop-in, groups, in-class and workshops.

For individual tutoring, fill out a weekly individual application:

http://deanza.fhda.edu/studentsuccess/mstrc/weekly_ind.html

For group tutoring, contact to Helen at nguyenhelen@deanza.edu.

Disability Support Services

<https://www.deanza.edu/dsps/dss/>

Students with disabilities who qualify for academic accommodations must provide a notification from the Disability Support Services (DSS) and discuss their specific needs with the instructor at the beginning of the quarter.

For information or questions about eligibility, support services or accommodations to disability (physical or learning disability) please contact Disability Support Services (DSS).

Phone number: (408) 864-8753

Email: dss@deanza.edu

Tentative Schedule

January 25 – Quiz 1

February 1– Quiz 2

February 8 – Exam 1

February 22 – Quiz 3

February 29 – Quiz 4

March 7 – Exam 2

March 19 and 21 – Final report and Presentation

March 28, 4:00 PM - 6:00 PM – Final Exam

- Any change in schedule is announced during class. Students are responsible for keeping track of schedule changes.
- Final Exam date/time is the college mandated official final exam date/time.
- Group Work is assigned randomly during class time and the due dates will be announced.

Course materials (syllabus, lecture presentations, quiz/exam answer keys and additional resources) are uploaded onto Canvas. It is accessible to you via MyPortal as you are enrolled in the course. You can also access into Canvas using direct link (<https://deanza.instructure.com>) with your MyPortal login credentials.

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:

F	04:00 PM	05:00 PM	Zoom
F	03:00 PM	05:00 PM	Zoom