



## Math 44.27Z - Mathematics in Art, Culture and Society

Spring 2021

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

Online classes via Zoom

<b>Instructor:</b> Lilit Mazmanyanyan	
<b>Contact:</b> <a href="mailto:mazmanyanyanlilit@fhda.edu">mazmanyanyanlilit@fhda.edu</a>	<b>Office hours:</b> Friday, 4:00 – 5:00 PM, online via Zoom (check Canvas course for instructions)

This is an online class and instructional method is **synchronous**. Lectures will be delivered online via Zoom during scheduled class times. Virtual breakouts will be used for group collaboration. Instructions how to connect Zoom lectures can be found on Canvas, which are accessible to you via **MyPortal** as you are enrolled in the course. You can also access Canvas using direct link (<https://deanza.instructure.com>) with your MyPortal login credentials. We will communicate via Canvas Inbox, discussion board, Zoom office hours, and emails. Check periodically Canvas announcements. Instructions to access WebAssign for online homework and Zoom for office hours can be found on our Canvas course.

Information about Canvas and Online Education Orientation can be found in Canvas on the Student Resources page: <https://deanza.instructure.com/courses/3382>. The Student Online Resources hub with extensive information and tips can be found at [deanza.edu/online-ed/students/remotelearning](https://deanza.edu/online-ed/students/remotelearning).

### 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 (MATH 109, MATH 114 or MATH 130) or equivalent.

Advisory: EWRT 211 and READ 211, or ESL 272 and 273.

### Textbook

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

### Calculators

- A TI-83 PLUS, TI-84 or TI-84 PLUS graphing calculator is recommended for this course.
- If you do not have graphing calculator you can use online calculator via website as DESMOS (<https://www.desmos.com>) or GeoGebra (<https://www.geogebra.org>).

<b>Homework (HW)</b>	<ul style="list-style-type: none"> <li>• There are 10 homework for each chapter.</li> <li>• Homework must be completed and submitted online on Canvas.</li> <li>• Due date for each homework is Sunday.</li> <li>• After the due date/time, HW cannot be submitted for credit.</li> <li>• The lowest homework score will be dropped.</li> </ul>
<b>Group Work and Discussions (GWD)</b>	<ul style="list-style-type: none"> <li>• There are 4 group work and discussions.</li> <li>• GWD must be completed in groups of at least two and no more than four.</li> <li>• Topics and details will be discussed in class.</li> </ul>

<b>Research Paper (RP)</b>	<ul style="list-style-type: none"> <li>• Each student must submit a research paper on a contemporary or historical mathematical source.</li> <li>• Student must be ready to present the report orally.</li> <li>• It will be assigned in the middle of the quarter due end of the quarter.</li> </ul>																																								
<b>Quizzes (Q)</b>	<ul style="list-style-type: none"> <li>• There are 4 quizzes through Canvas.</li> <li>• Quizzes are timed and they will be assigned on Thursday due Sunday.</li> <li>• NO MAKE-UP QUIZZES are given.</li> <li>• Missed quiz is graded as a zero (0).</li> <li>• The lowest quiz score will be dropped.</li> </ul>																																								
<b>Exams &amp; Final Exam (EX,FE)</b>	<p>There will be four (3) examinations through Canvas.</p> <ul style="list-style-type: none"> <li>• EX 1 &amp; 2 are one hour each and Final exam is two (2) hours.</li> <li>• EX 1 &amp; 2 and the FE dates are on the course schedule.</li> <li>• It is recommended to have ready one or two sheets of notes.</li> <li>• There are NO MAKE-UP examinations.</li> <li>• An absence from any examination earns a grade of zero (0).</li> <li>• You MUST take the final exam to pass the course.</li> </ul> <p>Check the announcements for instructions and follow the course schedule on Canvas.</p>																																								
<b>Grading</b>	<p>Students will be graded on homework (HW), group work and discussions (GWD), research paper (RP), quizzes (Q), and exams (EX1 &amp; 2, FE).</p> <p><b>Distribution of weights for each category</b></p> <table border="1" data-bbox="435 1052 1154 1331"> <thead> <tr> <th>Category</th> <th>% Weight on Final Grade</th> </tr> </thead> <tbody> <tr> <td>Homework</td> <td>10 %</td> </tr> <tr> <td>Group Work and Discussions</td> <td>10 %</td> </tr> <tr> <td>Research Paper</td> <td>10 %</td> </tr> <tr> <td>Quiz</td> <td>10 %</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><b>Grading Scale</b></p> <table border="1" data-bbox="435 1398 976 1539"> <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>&lt;60</td> </tr> </tbody> </table> <p><b>Extra Credit</b> 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	Homework	10 %	Group Work and Discussions	10 %	Research Paper	10 %	Quiz	10 %	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
Category	% Weight on Final Grade																																								
Homework	10 %																																								
Group Work and Discussions	10 %																																								
Research Paper	10 %																																								
Quiz	10 %																																								
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																																				

**Important Dates and Deadlines** (<https://www.deanza.edu/calendar>)

<b>Monday</b>	<b>April 5</b>	First day of Spring Quarter 2021.
<b>Saturday</b>	<b>April 17</b>	Last day to add quarter-length classes. <b>Add date is enforced.</b>
<b>Sunday</b>	<b>April 18</b>	Last day to drop for a full refund or credit. Last day to drop for a class with no record of grade. <b>Drop date is enforced.</b>

<b>Friday</b>	<b>May 28</b>	Last day to drop with a "W." <b>Withdraw date is enforced.</b>
<b>Monday</b>	<b>May 31</b>	Holiday: Memorial day (no classes).
<b>Monday-Friday</b>	<b>June 21-26</b>	Final examination <a href="https://www.deanza.edu/calendar/finalexams.html">https://www.deanza.edu/calendar/finalexams.html</a>

### 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.
- 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](https://www.deanza.edu/policies/academic_integrity.html)

### Student Success Center

<http://deanza.edu/studentssuccess/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/studentssuccess/mstrc/weekly\\_ind.html](http://deanza.fhda.edu/studentssuccess/mstrc/weekly_ind.html)

For group tutoring, contact to Helen at [nguyenhelen@deanza.edu](mailto: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](mailto:dss@deanza.edu)

**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.