

**MATH/EDUC-46-27Z: Mathematics for Elementary Education [CRN 46426 & 01253]
Tu-Th 01:30 pm–03:45 pm, Location Zoom Classes
meets 04/05/2021 to 06/25/2021.**

Instructor: Reza Shariatmadari, **Email:** shariatmadarireza@fhda.edu **Office**

Hours: Thursdays: From 12:00PM to 01:00PM on Zoom.

Required Textbooks:

1- Sophies Diary, A Mathematical Novel by Dora Musielak 2-
Mathematics For Human Flourishing, by Francis Su.

Calculators: In general we don't use calculator in this class that often, but when needed, online calculator/graphing calculator (like DESMOS or GeoGebra) will suffice. If you are allowed to use a calculator during an exam or quiz, it must be a non-graphing, simple calculator. You will be notified in advance if calculator is allowed during exams.

Course Description and Prerequisites: Designed for prospective elementary and middle school teachers. An introduction to the discipline of mathematics as the use of logical, quantitative, and spatial reasoning in the abstraction, modeling, and problem solving of real-world situations. The main topics in the course include the origins of mathematics, mathematical reasoning and problem solving strategies, theory of sets, integers and integral number theory, rational numbers and proportion, real numbers and decimal notation, and measurement. Throughout the course students will experience the learning of mathematics in a way that models how they can create an active learning environment for their future students.

Prerequisite: MATH 114 with a grade of C or better, or a qualifying score on Intermediate Algebra Placement Test within the past calendar year. Advisory: EWRT 211 and READ 211 (or LART 211), or ESL 272 and 273.

Important Footnote information: This is an online class with SOME scheduled meetings as noted in the class listing. The rest of the class can be completed independently each week on the student's own time. Students must have access to a computer, the internet and an individual email address. Most De Anza classes will use the Canvas course management system. Information about Canvas and Online Education Orientation can be found in Canvas on the Student Resources.

By the end of this quarter, I want you to be able:

- 1- to match key terms to the appropriate concepts and definitions.
- 2- to define key terms in your own words.
- 3- to recognize and use concepts and procedures correctly in new situations appropriate to your discipline.
- 4- to break larger issues/problems into their component parts in order to facilitate problem solving and deeper understanding.
- 5- to combine concepts and procedures from this class in new ways to solve problems or create new ways of seeing the course content.
- 6- to compare and contrast data in such a way that allows you to solve problems and accomplish your goals.

Course Policy:

- 1- No late work will be accepted under any circumstances nor credit given for late homework and assignments.
- 2- No make-up exams will be given under any circumstances.
- 3- Do not text during class time.
- 4- Your cell phone should either be off or on silent mode, but not on vibration during class time.
- 5- I will not tolerate prejudiced and/or hateful comments such as racism, homophobia, sexism, misogyny or other forms of hate-speech, or contributions that could be interpreted as such. Personal attacks, trolling, abuse and provocative, insulting, aggressive or threatening behavior will not be tolerated.

Few tips on how to succeed in my class:

Your success in my class is extremely important to me and I will do everything in my power to help you. Here are few tips:

- 1- Be an active learner, don't memorize, learn the concepts.
- 2- When you try to solve a problem, make sure you understand what the problem is asking for. Read the question multiple times and then come up with a strategy to solve the problem.

3- Don't be afraid of making mistakes. Form a strategy, if it doesn't work, try a different strategy.

4- No matter what, Never, Ever, give up.

5- Ask questions.

6- Think, think, and think. Never start solving a problem without thinking.

Midterms: Look at the last page.

Tentative Midterms Schedule: Look at the last page.

Final Exam: Final Exam is scheduled on Tuesday June 22, 2021 from 1:45 PM to 3:45 PM. Final exam will be given either during scheduled final exam, as a take home exam, group exam , oral exam or any combination of them. You will be notified in advance about the format of the final.

Homework: Homework and recommended problems will be assigned according to our progress in class. They provide practice, help clarify ideas introduced in class or in the text, and constitute a **partial** guide as to what to expect on Quizzes and Exams. You are encouraged to work together to study and do your homework.

Attendance and class participation: I expect that you attend all my lectures. You are expected to come to class prepared for the days discussion.

Should you miss a lecture for any reason, you are responsible for all the materials covered and assignments given. I suggest that you contact your group members to find out about the material that you have missed. I will not repeat any lectures under any circumstance, neither in class nor during my office hours.

Academic Integrity: Students are reminded that their behavior at all times reflects upon the college community. The minimum penalty for cheating, plagiarism, etc. is a grade of zero on the assignment. For additional information on the college's policies, read the Ethics and the Academic Integrity Policy at <http://www.deanza.edu/studenthandbook/academic-integrity.html>.

Disability Services: Students with disabilities should contact Disability Support Programs Services, Building: AT209. Contact: Marilyn Booye, Phone: 408.864.8407. I am happy to meet with you to

discuss necessary academic accommodations once I receive appropriate documentation from Disability Support Programs Services.

In-Class Recordings: You are NOT allowed to take a video recording, audio recording, or streaming audio/video of private, non-public conversations and/or meetings, inclusive of the classroom setting, without the knowledge and consent of all recorded parties, except in cases of approved disability accommodations. Dissemination or sharing of any classroom recording without the permission of the instructor would be considered misuse and, therefore, prohibited.

Important Dates: For important dates, see De Anza Academic Calendar ASAP.

Getting Help: Tutoring is also available at "Math, Science and Technology Resources Center (S43). Please take advantage of this service at no cost to you.

Grades: Course grades will be determined by homework, midterms, and final exam. I reserve the right to make changes to the syllabus. I will not discuss your grades via email for security and privacy reasons but you must consult with me about your standing in class over zoom throughout the quarter. I strongly suggest that you do not leave anything for the last minute.

General guidelines are as follows:

Homework: 10%
Quiz: 10%
PSP Project: 20%
Presentation: 15%
First Paper: 15%
Second Paper: 15% Final
Exam: 15%

Your course letter grade will be assigned as follows:

A (Excellent) 94% to 100%
A- (Excellent) 90% to less than 94%
B+ (Good) 87% to less than 90%
B (Good) 84% to less than 87%
B- (Good) 80% to less than 84%
C+ (Satisfactory/adequate) 77% to less than 80%
C (Satisfactory/adequate) 74% to less than 77%
C- (Satisfactory/adequate) 70% to less than 74%
D+ (Less than Satisfactory/Barely Passing) 67% to less than 70%
D (Less than Satisfactory/Barely Passing) 64% to less than 67%
D- (Less than Satisfactory/Barely Passing) 60% to less than 64%
F (Not Passing) 00% to less than 60%

Few more additional course policies as the result of pandemic: This class is a "synchronous" class which means your participation during official class schedule is expected. From time to time I

will assign an "asynchronous" class where the class time will be used only as Q/A sessions based on the reading assignments. There will be no lecture during an "asynchronous" session.

Class sessions and lecture are NOT recorded. One of my objective for this class is for you to develop self confidence in your abilities to learn and do mathematics, by reading, thinking and asking questions, rather than memorizing bunch of facts or by watching videos. These days there are plenty of videos on any subject available online and I just don't want to add to the clutter.

If you miss any class, synchronous or asynchronous, you are responsible for catching up and finding what you have missed. Start by getting the class notes either by contacting your group members or your classmates (but not me). Remember that I will not repeat any lecture, give private lecture during office hours (or any other time) to anyone.

Come to office hours as much as you can and as often as you can and ask question. Remember, there is no right or wrong question, there is no smart or stupid question. I answer any question that you have no matter how elementary it may sounds.

If you have an obligation during office hours which prevents you from attending, or you have a private issue to discuss, remember that you can always send me an email and set up a 5 to 10 minutes private appointment. By obligation I mean: work related activity, SCU sport related activity, medical reasons, or conflict with other classes.

Since your exam will take place over zoom, I must have a clear view of you, your both hands and your working area at all times. So take time and prepare your environment for exam days. You can always log into zoom from 2 devices and use one of those devices as a camera. To submit your exams, or any document to Camino, you must make sure your document is saved as a pdf. Any other types of files are not accepted. Also, during exams, you must remain on zoom while submitting your work. If you log out of zoom and then submit your work you will lose substantial amount of point.

I highly suggest that you do not show up late on exam day. If you are late to any exam (after I release the exam on Camino) you will lose substantial amount of points.

Exams/Quiz/Assignments/Papers:

Quiz 1: April 22, 2021

First Paper: May 11, 2021

Quiz 2: May 18, 2021

PSP Project: June 01,, 2021

Presentation: June 08, 2021

Second Paper: June 15, 2021

Final Exam: June 22, 2021

Student Learning Outcome(s):

*Analyze mathematical problems from elementary mathematics, apply problem solving techniques using a variety of methods, solve these problems individually and in groups, and communicate results mathematically through a variety of forms.

*Utilize ideas from number theory, distinguish types and properties of numbers, and employ mathematical rules for operating on rational and irrational numbers using verbal, symbolic, geometric, and numerical methods.

*Examine and evaluate myths and realities about the contemporary discipline of mathematics and its practitioners.

*Identify and discuss developments in the history of elementary mathematics from a variety of cultures.