MATH 22. 35573

Discrete Mathematics Winter 2021

> "There are no secrets to success. Success is the result of preparation, hard work, and learning from failure."
> Colin Powell

On **Mon Wed 6:30 PM-8:45 PM**

there will be live sessions which are recorded and posted to canvas

Instructor: Fatemeh Yarahmadi

E-mail: yarahmadifatemeh@fhda.edu

Office Hours: Tuesday and Thursday 12-2 pm

My office hours are times for conversation about the course and your work in it. I am here to answer questions, offer feedback, discuss a course concept, or just listen as you explore a line of reasoning. I can also direct you to resources to help you meet challenges you face outside of class.

Questions outside of office hours? I will respond to your message or Q&A Discussion post within 24 hours, M-F. If you do not get a response after 24 hours, please resend.

Textbook & Required Materials:

Text: Epp, Susanna. Discrete Mathematics: **An Introduction to Mathematical Reasoning**, Brief Edition. Cengage Learning, 2011.

Computer/smartphone to complete online homework assignments, submit activities on Canvas, and attend required live class meetings.

You should keep a **notebook** where you take notes and work the problems for reference.

Prerequisite:

Mathematics 41 (with a grade of C or better); or a satisfactory score on the College Level Math Placement Test within the last calendar year

Attendance:

Regular attendance and class participation is as vital in an online class as it is in a traditional classroom. You are expected to attend all Zoom meetings. You will be considered present if there is evidence of your participation in required course activities including, but not limited to, submitting an assignment, participating in an online discussion, and working in a group. If you consistently miss Zoom meetings, you may be dropped from the course. However, it is your responsibility to drop yourself if you wish to drop the course.

Instructor Communication:

I am looking forward to working closely with you this term, and you can expect me to play an active role in our course. I will hold live lectures, post announcements every week, join you in breakout rooms and class discussions to help you understand course concepts, and provide detailed feedback on assignments within one week of submission. I will also answer questions throughout the term in the Q&A Discussion and in our weekly discussions. Please let me know when you need help—that's why I'm here!

Canvas:

All class content, assignments and announcements will be on Canvas, which you can access through MyPortal. The course will be divided into weekly modules in Canvas. Weeks will run from Monday to Sunday, and all work for the week (including Discussions and HW) will be due Sunday night at 11:59 pm. The only exception to this is exams which will be timed. Please refer to the calendar.

Participation in online class:

Because this is an online class, there are no on-campus meetings to attend. However, this does not mean that you will be able to move through the class at your own speed. A major part of the class involves participation, discussing assignments and problems with your classmates.

Thus, everyone needs to be doing the same work at approximately the same time. You are expected to meet all deadlines for homework, and discussions. We are learning a lot of different concepts that build on one another and it is very difficult to catch up if you fall behind.

In-Class Group Activity:

There will be required group activities during our live class meetings. Even though the problems will be discussed in group, write up your own solutions independently.

1.   Groupwork MUST be done in pencil.
2.   Your name, class, and section number should be written at the top of the first page.
3.   Work must be NEAT and ORGANIZED. Do problems IN ORDER.
4.   It is important for you to SHOW YOUR WORK! You are graded on the work you show to get the final answer, not just the final answer. Be sure to show your "scratch work" that goes with the problem.
5. Do your work underneath the assigned problem then circle your final answer.
6. Submit a single PDF document, NOT multiple images. Use a scanning app such as Adobe Scan or Genius Scan (both free), or something else from among many options. Be sure to check that your scanned copy is legible.
7. Groupwork will be due the same day at 11:59 pm.

Discussions and Presentations:

There will be weekly discussion topics posted on Canvas. The deadline for responding to the topic is Sunday 11:59 pm. You may not respond to the discussion once the deadline has passed.

Homework:

Written sets for submission: During the term, I will send out homework sets to be written up and submitted on Canvas. Homework is essential in any math class. You cannot expect to pass the class without putting consistent effort into homework. The deadline for submit the homework is Sunday 11:59 pm.

HW Guidelines:

The process of solving homework problems reflected in step-by-step solutions. The following are some specific criteria:

Guidelines for homework:

1.   Homework MUST be done in pencil.

2.   Your name, class, and section number should be written at the top of the first page.

3.   Work must be NEAT and ORGANIZED. Do problems IN ORDER.

4.   It is important for you to SHOW YOUR WORK! You are graded on the work you show to get the final answer, not just the final answer. Be sure to show your "scratch work" that goes with the problem. Do your work underneath the assigned problem then circle your final answer.

Projects:

Projects will be assigned throughout the quarter and will be worth 50 points. The deadline for submit the assigned week projects is Sunday 11:59 pm during that week.

Exam Reviews:

There will be an exam review assigned before each midterm exam worth 10 points each. The purpose of the review is to aid the student in studying for the exams.

Midterm Exams:

There will be **three exams** to test your understanding of the concepts from lecture and the homework. They should be straightforward for those who complete and understand the homework. Each exam will be worth 100 points. A total of 300 points will be counted toward your final grade.

No make-up exams will be given. If you are forced to miss an exam, you need to contact me **before** the exam with a valid reason.

Final Exam:

The final exam will be posted on Canvas and will cover all material from throughout the term. You will have two hours to complete the final. More details on the final exam will be available on Canvas.

Grading Policy:

Homework	Maximum of 70 points
Group Activities	Maximum of 100 points
Discussions and Presentations	50 points
Projects	50 points
Midterm Review	(3 @ 10 pts) 30 points
Midterms	(3 @ 100 pts) 300 points
Final	200 points
Total	800 points

A	100%	to 94.5%
A-	< 94.5%	to 89.5%
B+	< 89.5%	to 86.5%
B	< 86.5%	to 83.5%
B-	< 83.5%	to 79.5%
C+	< 79.5%	to 74.5%
C	< 74.5%	to 69.5%
D+	< 69.5%	to 66.5%
D	< 66.5%	to 63.5%
D-	< 63.5%	to 59.5%
F	< 59.5%	to 0%

Important Dates and Deadlines: http://www.deanza.edu/calendar/dates-and-deadlines.html

De Anza Final exams schedule: https://www.deanza.edu/calendar/final-exams.html

For detailed information on Homework, Projects, Discussion please log into your Canvas course page.

Academic Integrity:
All students are expected to exercise high levels of academic integrity throughout the quarter. You are encouraged to work together but you are expected to write up your answers independently. Any instances of cheating or plagiarism will result in disciplinary action, including getting a '0' on the assignment and report to the PSME dean, which may lead to dismissal from the class or the college

Student Honesty Policy:
"Students are expected to exercise academic honesty and integrity. Violations such as cheating and plagiarism will result in disciplinary action which may include recommendation for dismissal."

<u>Disabled Services:</u>

Students who have been found to be eligible for accommodations by Disability Support Services (DSS), please follow up to ensure that your accommodations have been authorized for the current quarter. If you are not registered with DSS and need accommodations, please go to http://www.deanza.edu/dss.

This syllabus is subject to change at the instructor's discretion. Changes will be announced in class and on Canvas.

Recipe for Success:

- If you ever have any questions, Email me! You are welcome to send email to me whenever you need help!
- Visit the Online Tutoring Center.
- Form an online study group.
- Watch all lectures, participate in every discussion, and complete every homework assignment.
- Read the sections to be discussed in class prior to the lecture

Section	Course Content
Chapter 1	Speaking Mathematically
Chapter 2	The Logic of Compound Statements
Chapter 3	The Logic of Quantified Statements
Chapter 4	Elementary Number Theory and Methods of Proof
Chapter 5	Sequences, Mathematical Induction, and Recursion
Chapter 6	Set Theory
Chapter 7	Functions
Chapter 8	Relations
Chapter 9	Counting and Probability
Chapter 10	Graphs and Trees

Tentative Schedule

WEEK	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	Friday	Sunday
1	4 Ch 1	5	6 Ch1/ Ch2	7	8	HW 1 Due
2	11 Ch 2/ Ch 3	12	13 Ch 3	14	15	HW 2 Due
3	18 -	19	20 Exam 1 (Ch 1, Ch 2, Ch 3)	21	22	HW 3 Due
4	25 Ch 4	26	27 Ch 4/ Ch 5	28	29	HW 4 Due
5	1 Ch 5	2	3 Ch 5/ Ch 6	4	5	HW 5 Due
6	8 Ch 6	9	10 Ch 6/ Ch 7	11	12 -	HW 6 Due
7	15 -	16	17 Exam 2 (Chapter 4, 5, 6)	18	19	
8	22 Ch 7	23	24 Ch 8	25	26	HW 7 Due
9	1 Ch 8	2	3 Ch 9	4	5	HW 8 Due
10	8 Ch 9	9	10 Exam 3 (Chapter 7, 8, 9)	11	12	HW 9 Due
11	15 Ch 10	16	17 Ch 10 Final Review	18	19	HW 10 Due
12			**Wednesday from 6:15 PM to 8:15 PM**			

Student Learning Outcome(s):

*Critique a mathematical statement for its truth value, defend choice by formulating a mathematical proof or constructing a counterexample.
*Analyze and apply patterns of discrete mathematical structures to demonstrate mathematical thinking.