DeAnza College

Math 22.40Z – Discrete Mathematics Summer 2021
Meets: MTWTh, 6:00 PM to 6:50 PM
Online classes via Zoom

Instructor: Lilit Mazmanyan	
Contact: mazmanyanlilit@fhda.edu	**Office hours:** On-line (email/Canvas)

Instructional method is a combination of **synchronous and asynchronous learning**. Synchronous classes meet on **MTWTh**, **6:00 PM to 6:50 PM**. Lectures will be delivered online via **Zoom** during scheduled class times. Virtual breakouts will be used for group collaboration. For asynchronous part you can study some of the assigned course materials and complete some of the assignments via Canvas at your own pace meeting deadlines. Recorded lectures will be available through Canvas.
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. Communications with students will be maintained via Zoom, announcements on Canvas, and emails.

Course Description
Elements of discrete mathematics with applications to computer science. Topics include methods of proof, mathematical induction, logic, sets, relations, graphs, combinatorics, and Boolean algebra.

Prerequisites
- MATH 32, 43 or 43H with a grade of C or better or equivalent, and CIS 22A or CIS 35A with a grade of C or better or equivalent.
- Advisory: EWRT 211 and READ 211 (or LART 211), or ESL 272 and 273.

Textbook
Epp, Susanna S., "*Discrete Mathematics: Introduction to Mathematical Reasoning.*" 1st ed. Boston, MA: Brooks/Cole, 2011.

Supporting Textbook
Epp, Susanna S., "Discrete Mathematics with Applications." 4th ed. Boston, MA: Brooks/Cole, 2011.

Calculator
- You are allowed to use a scientific calculator.
- If you do not have calculator, you can use online calculator via website as DESMOS (https://www.desmos.com) or GeoGebra (https://www.geogebra.org).

Homework (HW)	• Homework must be completed and submitted online on Canvas. • Due date for each homework is Sunday. • After the due date/time, HW cannot be submitted for credit. • The lowest homework score will be dropped.
Group Work (GW)	• GW must be completed in groups of at least two. • Topics and details will be discussed in class. • The group work culminates in a written report. • May be used programming languages such as Matlab, C, C++, Python or similar.
Quizzes (Q)	• There are 5 quizzes through Canvas. • Quizzes are timed and they will be assigned on Thursday due Sunday.

	• 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)	There will be four (3) examinations trough Canvas. • EX 1 & 2 are one hour each and Final exam is two (2) hours. • Examinations will be assigned on the scheduled day and they are due Saturday. • It is recommended to have ready one or two sheets of notes. • 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. Check the announcements for instructions and follow the course schedule on Canvas.
Grading	Students will be graded on homework (HW), group work (GW), quizzes (Q), and exams (EX1, EX2, FE). Grading depends on the clarity of work, interpretations, accuracy and completeness of graphs, and explanations as well as numerical answers. **Distribution of weights for each category** Category / % Weight on Final Grade Homework 10 % Quizzes 15 % Group Work 15 % Exam 1 20 % Exam 2 20 % Final Exam 20 % **Grading Scale** 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 A 94-100 A- 90-93

Important Dates and Deadlines

https://www.deanza.edu/calendar

Monday	**June 28**	First day of Summer Quarter 2021
Tuesday	**June 29**	Last Day for Drops w/ Refund
Wednesday	**June 30**	Last Day for Adds
Thursday	**July 1**	Last Day for Drops w/o W
Monday	**July 5**	Independence Day holiday, no class
Wednesday	**July 28**	Last Day for Drops
Thursday	**August 5**	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

	Monday	Tuesday	Wednesday	Thursday
Week 1	June 28 **Syllabus/Chapter 1** Speaking Mathematically	June 29 **Chapters 1&2** Speaking Mathematically & The Logic of Compound Statements	June 30 **Chapter 2** The Logic of Compound Statements	July 1 **Chapters 2&3** The Logic of Compound Statements & Quantified Statements **Quiz 1**
Week 2	July 5 **Independence Day holiday, No class**	July 6 **Chapters 3&4** The Logic of Quantified Statements & Elementary Number Theory **GW 1**	July 7 **Chapter 4** Elementary Number Theory and Methods of Proof	July 8 **Exam 1 (one hour)** **Chapters 1-4** **Chapter 4 (cont.)**
Week 3	July 12 **Chapter 4** Elementary Number Theory and Methods of Proof	July 13 **Chapter 4** Elementary Number Theory and Methods of Proof	July 14 **Chapter 5** Sequences, Mathematical Induction, and Recursion	July 15 **Chapter 5** Sequences, Mathematical Induction, and Recursion **Quiz 2,3**
Week 4	July 19 **Chapter 6** Set Theory	July 20 **Chapter 6** Set Theory **GW 2**	July 21 **Chapter 7** Functions	July 22 **Exam 2 (one hour)** **Chapters 5-7** **Chapter 7 (cont.)**
Week 5	July 26 **Chapters 7&8** Functions & Relations	July 27 **Chapter 8** Functions & Relations	July 28 **Chapters 8&9** Relations, Counting and Probability	July 29 **Chapter 9** Counting and Probability **Quiz 4,5**
Week 6	August 2 **Chapters 9&10** Probability, Graphs and Trees	August 3 **Chapter 10** Graphs and Trees	August 4 **Chapter 10** **Review Problems**	August 5 **Final Exam (two hours)** **Chapters 1-10** **6:00 PM - 8:00 PM**

- Any change in schedule is announced during class and via Canvas Announcements. Students are responsible for keeping track of schedule changes.
- **GW** – Group work will be discussed in class.
- **HW** assignments can be found on **Canvas**. They are due each Sunday.

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):

*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.