Math 22.61 – Discrete Mathematics
Summer 2019
Meets: MTWTh, 5:30 PM to 7:45 PM
Room: MLC108

Instructor: Lilit Mazmanyan	**Office:** On-line (email/Canvas)
Contact: mazmanyanlilit@fhda.edu	**Office hours:** Friday, 5:00 PM to 6:00 PM

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 43 or MATH 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.
- Cell phones or other devices CANNOT be used in place of a permitted calculator on any quiz or examination.

Homework (HW)	• Homework will be assigned for each chapter and will be collected before each exam day • Complete the hw on standard letter size paper and staple them before submission • Homework cover page must include your name, assignment and exercise numbers • Late homework will be penalized by half grade
Quizzes (Q)	• Quiz is closed book • Based on classwork and homework • One sheet of notes (single-sided 8.5 x 11-inch), HANDWRITTEN, 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)	There will be four (4) examinations • EX 1,2&3 are one hour each and Final exam (FE) is two hours • EX 1,2&3 and the FE dates are on the course schedule • Exams are closed book • If English is the student's second language, a paper English translation dictionary is permitted • Electronic English translation dictionaries are NOT permitted • No cellphones or other technologies are allowed during the Exams except scientific calculator

	• One sheet of notes (double-sided 8.5 x 11-inch), HANDWRITTEN, is allowed for the Exams 1,2&3 • Two sheets of notes (double-sided 8.5 x 11-inch), HANDWRITTEN, are allowed for the Final Exam • There are NO MAKE-UP examinations • An absence from any examination earns a grade of zero (0) • The lowest score of exams 1,2&3 will be replaced by a percentage on the final exam if the latter is higher • You MUST take the final exam to pass the course
Grading	Students will be graded on homework (HW), quizzes (Q), and exams (EX1,2&3, FE). Grading depends on the clarity of work, interpretations, accuracy, completeness, and explanations as well as numerical answers. **Distribution of weights for each category** Category: % Weight on Final Grade Homework: 10 % Quizzes: 10 % Exam 1: 20 % Exam 2: 20 % Exam 3: 20 % Final Exam: 20 % **Grading Scale** A+ ≥99 A 94-98 A- 90-93 B+ 86-89 B 82-85 B- 78-81 C+ 74-77 C 70-73 D+ 64-69 D 58-63 D- 50-57 F <50 **Extra Credit** During the course you will have opportunities for extra credits. There will be extra problems included in the coursework and on exams.

Important Dates and Deadlines
https://www.deanza.edu/calendar

Monday	**July 1**	First day of Summer Quarter 2019
Thursday	**July 4**	Independence Day holiday - Campus Closed
Thursday	**August 8**	Final examination

Attendance, Drops or Withdrawals
- Regular 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 an '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.

Academic dishonesty includes:
- Copying from other students (plagiarism)
- Using notes during a quiz or examination that do not meet permitted specifications
- Continuing to write or erase on a quiz or examination after the permitted time has ended
- Using any electronic device other than the approved TI calculator on a quiz or examination
- Sharing a calculator with another student for a quiz or examination

You can find more information on academic integrity at https://www.deanza.edu/policies/academic_integrity.html

Disruptive Behavior:
The use of cell phones and other noise emitting devices is disruptive. Students must keep their cell phones and other noise making devices in the off-mode, and keep them off the desk and out-of-sight.

Disruptive behavior includes:
- Engaging in an activity not related to the classroom activity
- Eating or drinking during class
- Monopolizing discussion time
- Late arrivals or early departure

Tutoring
The Math, Science and Technology Resource Center (MSTRC) is located in S43 on the De Anza Campus, (408) 864-5422. Hours of operation: Monday - Thursday 9:00 am - 5:30 pm, Friday 9:00 am - 12:00 pm. The MSTRC provides free tutoring services such as drop-in tutoring, weekly individual tutoring, and group tutoring.
Student Success Center: http://deanza.edu/studentsuccess/mstrc/

Students with Disabilities
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). DSS is located in Registration and Student Services Building, RSS Room 141. Phone number is (408) 864-8753; TTY (408) 864-8753. Email is dss@fhda.edu.
Disability Support Services: https://www.deanza.edu/dss/

Tentative Schedule

	Monday	Tuesday	Wednesday	Thursday
Week 1	July 1 **Syllabus/Chapter 1** Speaking Mathematically	July 2 **Chapters 1&2** Speaking Mathematically & The Logic of Compound Statements	July 3 **Chapter 2** The Logic of Compound Statements **Quiz 1**	July 4 Independence Day Holiday **No class**
Week 2	July 8 **Chapter 3** The Logic of Quantified Statements	July 9 **Chapter 3** The Logic of Quantified Statements **Quiz 2**	July 10 **Chapters 3&4** Elementary Number Theory and Methods of Proof **HW1**	July 11 **Exam 1 (one hour)** **Chapters 1-3** **Chapter 4 (cont.)**
Week 3	July 15 **Chapter 4** Elementary Number Theory and Methods of Proof	July 16 **Chapter 4** Elementary Number Theory and Methods of Proof	July 17 **Chapter 5** Sequences, Mathematical Induction, and Recursion **Quiz 3**	July 18 **Chapter 5** Sequences, Mathematical Induction, and Recursion
Week 4	July 22 **Chapter 6** Set Theory **Quiz 4**	July 23 **Chapter 6** Set Theory **HW2**	July 24 **Exam 2 (one hour)** **Chapters 4-6** **Chapter 7** Functions	July 25 **Chapter 7** Functions
Week 5	July 29 **Chapter 7&8** Functions & Relations	July 30 **Chapter 8&9** Relations & Counting and Probability **Quiz 5**	July 31 **Chapter 9** Counting and Probability **HW3**	August 1 **Exam 3 (one hour)** **Chapters 7-9** **Chapter 9 (cont.)**
Week 6	August 5 **Chapter 10** Graphs and Trees	August 6 **Chapter 10** Graphs and Trees **Quiz 6**	August 7 **Review Problems**	August 8 **Final Exam** **(two hours)** **Chapters 1-10** **5:30 PM - 7:30 PM**

- Any change in schedule is announced during class. Students are responsible for keeping track of schedule changes.
- 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.