



Math 22.05 – Discrete Mathematics
Meets: MTWTh, 12:30 PM to 2:45 PM
Online classes via Zoom

Summer 2020

Instructor: Lilit Mazmanyanyan	
Contact: mazmanyanyanlilit@fhda.edu	Office hours: On-line (email/Canvas)

Instructional method is **synchronous learning**. 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. 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 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)	<ul style="list-style-type: none"> • HW will be assigned every week but they will not be collected nor graded • Quizzes and exams will include similar problems from your homework • Ask your homework questions before quiz and exam
Group Work (GW)	<ul style="list-style-type: none"> • 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)	<ul style="list-style-type: none"> • 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)	<p>There will be four (4) examinations</p> <ul style="list-style-type: none"> • 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 • 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) • You MUST take the final exam to pass the course 																																										
Grading	<p>Students will be graded on homework (HW), group work (GW), quizzes (Q), and exams (EX1, EX2, FE).</p> <p>Grading depends on the clarity of work, interpretations, accuracy and completeness of graphs, and explanations as well as numerical answers.</p> <p>Distribution of weights for each category</p> <table border="1" data-bbox="407 890 1123 1100"> <thead> <tr> <th>Category</th> <th>% Weight on Final Grade</th> </tr> </thead> <tbody> <tr> <td>Quizzes</td> <td>10 %</td> </tr> <tr> <td>Group work</td> <td>10 %</td> </tr> <tr> <td>Exam 1</td> <td>25 %</td> </tr> <tr> <td>Exam 2</td> <td>25 %</td> </tr> <tr> <td>Final Exam</td> <td>30 %</td> </tr> </tbody> </table> <p>Grading Scale</p> <table border="1" data-bbox="407 1167 932 1339"> <tbody> <tr> <td>A+</td> <td>≥99</td> <td>A</td> <td>94-98</td> <td>A-</td> <td>90-93</td> </tr> <tr> <td>B+</td> <td>86-89</td> <td>B</td> <td>82-85</td> <td>B-</td> <td>78-81</td> </tr> <tr> <td>C+</td> <td>74-77</td> <td>C</td> <td>70-73</td> <td></td> <td></td> </tr> <tr> <td>D+</td> <td>64-69</td> <td>D</td> <td>58-63</td> <td>D-</td> <td>50-57</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>F</td> <td><50</td> </tr> </tbody> </table>	Category	% Weight on Final Grade	Quizzes	10 %	Group work	10 %	Exam 1	25 %	Exam 2	25 %	Final Exam	30 %	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
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Important Dates and Deadlines

<https://www.deanza.edu/calendar>

Monday	June 29	First day of Summer Quarter 2020
Saturday	July 4	Independence Day holiday
Thursday	August 6	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 29 Syllabus/Chapter 1 Speaking Mathematically	June 30 Chapters 1&2 Speaking Mathematically & The Logic of Compound Statements	July 1 Chapter 2 The Logic of Compound Statements	July 2 Chapters 2&3 The Logic of Compound Statements & Quantified Statements Quiz 1
Week 2	July 6 Chapter 3 The Logic of Quantified Statements	July 7 Chapters 3&4 The Logic of Quantified Statements & Elementary Number Theory Quiz 2	July 8 Chapter 4 Elementary Number Theory and Methods of Proof	July 9 Exam 1 (one hour) Chapters 1-4 Chapter 4 (cont.)
Week 3	July 13 Chapter 4 Elementary Number Theory and Methods of Proof	July 14 Chapter 4 Elementary Number Theory and Methods of Proof GW 1	July 15 Chapter 5 Sequences, Mathematical Induction, and Recursion Quiz 3	July 16 Chapter 5 Sequences, Mathematical Induction, and Recursion
Week 4	July 20 Chapter 6 Set Theory Quiz 4	July 21 Chapter 6 Set Theory	July 22 Chapter 7 Functions	July 23 Exam 2 (one hour) Chapters 5-7 Chapter 7 (cont.)
Week 5	July 27 Chapter 8 Functions & Relations	July 28 Chapter 8 Functions & Relations GW 2	July 29 Chapter 9 Counting and Probability Quiz 5	July 30 Chapter 9 Counting and Probability
Week 6	August 3 Chapter 10 Graphs and Trees	August 4 Chapter 10 Graphs and Trees	August 5 Review Problems	August 6 Final Exam (two hours) Chapters 1-10 12:30 PM - 2:30 PM

- Any change in schedule is announced during class and via Canvas Announcements. Students are responsible for keeping track of schedule changes.
- Final Exam date/time is the college mandated official final exam date/time.
- GW – Group work
- **HW** assignments can be found on **Canvas**.
- 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.