

## Syllabus: Math 22 (Section 40), Winter 2022

4:00 – 6:15 PM

Room S35

Instructor: Dr. Bill Wilson

Office Hours: 3:00-3:45 Monday, Wednesday Room E37

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### **Text:**

Epp, Susanna. **Discrete Mathematics: Introduction to Mathematical Reasoning**

We will use WebAssign. The WebAssign questions are associated with the 5<sup>th</sup> edition, which is available as an ebook from Cengage. However, the sections we cover are essentially the same in all editions. As long as you have gotten access to WebAssign, you should be able to use whichever edition is most convenient for you to obtain. However, De Anza has negotiated a bundled deal for the ebook and WebAssign. I will put a link on the Canvas course page that you can use to access the ebook and WebAssign assignment.

**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.

**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.

This course is different from most of the mathematics classes you have had. Instead of focusing on calculations involving real numbers, this class will focus on the abstract side of mathematics involving symbols, logic and proofs. I hope you find the material interesting and you gain a new appreciation for concepts you had some knowledge of before as well as learn some exciting new ideas.

**Class Meetings:** We will meet in person at the scheduled class times. Try to participate in the class session. If you cannot make a class, let me know.

**Homework:** Homework will be assigned most weeks and will usually be due before the beginning of our Monday class.

**Exams:** Three exams will be given plus the final exam. Exam dates will be announced at least a week ahead of time. There will be no makeups. If an exam is missed because of a valid excuse, an equivalent of the final exam score will be used as the score for the missed exam.

**Quizzes:** Regular quizzes will be given. Quizzes will be announced at least one class ahead of time. You redo up to two quizzes and potentially raise your score to 90%.

**Project:** The project will explore a mathematics topic related to the material in the course. The project can be done individually or as part of a group of 2-5 students. More details will be provided during the course

**Final Exam:** A comprehensive final exam will be given on 3/23/21 from 4:00 PM to 6:00 PM.

**Accommodations:** Students requiring accommodations are welcome in this class. Please notify me and DSS of any special requirements. Go to <https://www.deanza.edu/dss/> for more information.

**Grading:** 3 midterms @ 10% = 30%  
homework and class work: 15%  
quizzes: 15%  
projects: 20%  
final exam: 20%

**Scale:** A: 93+      A-: 90+  
B+: 87+      B: 83+      B-: 80+  
C+: 77+      C: 70+  
D: 60+  
F: < 60

**ESL:** If English is a second language, a print English translation dictionary is allowed for exams/quizzes

Expectations of Students:

1. **Academic dishonesty will not be tolerated.** If a student is found cheating on an exam or quiz, he or she will receive a 0 for the item. Repeated instances of cheating may lead to failing the course and further action.
2. **Showing your work.** You need to show your work on homework and exams to receive full credit.
3. **Respect you fellow students.** Silence cell phones and tablets in class.

**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.