

## **Instructor Information**

**Name:** Salvador Guerrero

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**Office Hours:** by appointment

## **Course Information**

**Title:** Discrete Mathematics

**Location and Time:** zoom on Monday-Thursday 7:30am – 9:45am

**Website:** we will be using Canvas ([deanza.instructure.com](https://deanza.instructure.com))

### **Materials:**

Text: *Applied Discrete Structures* by Al Doerr and Ken Levasseur (primary), *Discrete Mathematics* by Oscar Levin (secondary)

note: both texts are open textbooks available for free online (the links are in Canvas).

Technology: computer with which to access Canvas and graphing calculator (optional, TI-84 recommended)

Other: Pencil, eraser, and spiral notebook or composition book.

note: Exams and quizzes must be completed using pencil.

### **Requisites:**

Prerequisite: Mathematics 43 (with a grade of C or better), or equivalent and Computer Information Systems 22A or Computer Information Systems 35A (with a grade of C or better), or equivalent.

Advisory: EWRT 211 and READ 211 (or LART 211), or ESL 272 and 273.

**Hours:** Five hours lecture (60 hours total per quarter).

Note: it is advised that you set aside two hours of study time per hour spent in class.

**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.

### **Assignments:**

- There will be a writing assignment intended to provide some motivation for a specific topic discussed in class. You will be asked to read a paper based on original math works and then write an **essay**.
- There are a number of benefits to reading the text before class – classroom discussion becomes more conversational, you see the material multiple times, and you have time to formulate questions. You are expected to read the relevant textbook section before it is covered in class. You will be expected to **participate** in class by either answering or asking questions.
- Another important part of learning mathematics is to work through some exercises. Homework will be assigned on a daily basis. Although homework will not be collected, there will be five **homework quizzes** throughout the session with questions directly from the homework.
- There will be three **exams**, covering the material from roughly 6-8 meetings.
- There will be a mandatory two part final – a "**take home**" portion will be assigned at the end of week 5 and the "**in-class**" portion will take place the last day of class. Any student not taking the final exam will receive the grade of F.

### **Grading:**

- The **Essay** and **Project** (if applicable) will be graded on an evaluative scale - No Credit, Unsatisfactory, Marginal (Needs Improvement), Satisfactory (Meets Standards), Proficient (Exceeds Standards), or Exemplary (Far Exceeds Standards). A more specific rubric will be provided with each assignment.
- **Quizzes** and **Exams** will be graded mostly as correct or incorrect and some feedback provided. Exams and quizzes may be revised and resubmitted for additional credit. Details in Canvas.
- **Final Exam** will be graded with much consideration to partial credit since there is no possibility to re-work any mistakes.
- **Course Grades** will be determined as described in Canvas.

### **Policies and Resources**

**Academic Integrity:** Cheating, plagiarism and other forms of academic dishonesty will not be tolerated. Students are expected to be honest and ethical at all times in their pursuit of academic goals. A Student caught cheating, plagiarizing, or otherwise violating the rules for an assignment will receive a grade of 0 on the assignment in question; repeat offenders will receive a grade of F

in the course. In either case, a student may be referred to the Dean for academic discipline. No grade of 0 due to academic dishonesty will be dropped or replaced.

**Classroom Courtesy:** Your interactions with the instructor as well as your fellow classmates should be courteous and respectful at all times. Every student is entitled to learn in an environment free of distractions or disruptions (including phones, headphones, etc.). Students who are disrespectful or disruptive can, and will, be asked to leave. If a student does not leave after being asked they will be dropped from the course and referred to the Dean. **Audio/Video recordings of lecture are prohibited.**

**Attendance:** Attendance is required and you are responsible for all material covered in class. I expect you to arrive to class on time and stay until class is dismissed. If you miss a class, contact a fellow student to find out what was covered. Also:

- Students who remain enrolled in a class beyond the published withdrawal deadline, as stated in the class schedule, will receive an evaluative letter grade in this course.
- It is the student's responsibility to add, drop, or withdraw from classes before the deadlines stated in the college catalog. You should talk to me before withdrawing.
- Excessive absences may result in being dropped, at the discretion of the instructor.

**Tutoring/Additional Help:** Please consider the following (free) resources for additional help:

- In Person Tutoring: <https://www.deanza.edu/studentsuccess/mstrc>
- On-line Tutoring: <http://deanza.edu/studentsuccess/onlinetutoring>
- The internet: it is the future (2016), a time when information is literally at our fingertips.

**Accommodation of Disability:** Students that have any disability, either permanent or temporary, which might affect their ability to perform in this class should contact me immediately. For information or questions about eligibility, support services or accommodations to disability (physical or learning disability) see the contacts below:

- Disability Support Services (DSS): <http://www.deanza.edu/dss>
- Educational Diagnostic Center (EDC): <http://www.deanza.edu/edc>
- HOPE De Anza: <http://www.deanza.edu/hope>

**English as a Second Language:** ESL students may use a translator and/or dictionary (print only, to be approved by instructor) during exams and quizzes. Please visit the college's Listening and Speaking Center (LSC) for additional resources <http://www.deanza.edu/studentsuccess/lsc/>

**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.