

**MATH 245**

**DISCRETE MATH**

**SPRING 2023**

**INSTRUCTOR**

Dr. Jarred Collins

**WEBSITE**

[www.collinscalculusclass.org](http://www.collinscalculusclass.org)

**OFFICE**

Virtual

**OFFICE HOURS**

By appointment as necessary, zoom link on website

**CONTACT**

E-mail [collinscalculusclass@gmail.com](mailto:collinscalculusclass@gmail.com)

**LECTURE**

Lectures are on YouTube. link on website

**PREREQUISITES**

Math 151 with a grade of "C" or better, or equivalent.

**TEXT**

There is no text, see class policy.

**CONTENT**

Logic, set theory, functions, number theory, counting, graph theory and recursion.

**DESCRIPTION**

This course is an introduction to the theory of discrete mathematics and introduces elementary concepts in logic, set theory, number theory, and combinatorics. The topics covered include propositional and predicate logic, methods of proof, set theory, Boolean algebra, number theory, equivalence and order relations, counting techniques, and recursion. This forms a basis for upper division courses in mathematics and computer science, and it is intended for the transfer student planning to major in these disciplines.

**STUDENT LEARNING OBJECTIVES**

Students should be able to apply appropriate math definitions, properties and appropriate techniques in a variety of problem solving situations, as well as recognize an appropriate solution as opposed to an unreasonable or extraneous one.

Students will be able to demonstrate knowledge of the interrelatedness of the concepts within a particular course and/or among different courses.

Students will be able to demonstrate an ability to communicate mathematical reasoning, in the context of solving a problem, with clarity and detail.

Students will be able to choose and apply appropriate mathematical tools and technology to various problems.

## QUESTIONS

Problems with residency or registration should be resolved with Karina Sandoval (ksandoval@sdccd.edu) at Mesa College: (619)388-2683, I-400, 7250 Mesa College Drive, San Diego, 92111.

## CLASS POLICY

There is no text so familiarity with the website is crucial. The Math 245 page will have all the necessary material to include syllabus, class notes, worksheets, HW, important dates and video links. Please read through the notes and watch the accompanying videos BEFORE and scheduled Zoom sessions. Zoom sessions are meant as clarification, not for an entire lecture.

## EVALUATION

I will grade the HW, they are the worksheet problems with an asterik, and collectively the HW is worth 40% of your grade. You will take a picture of the HW and send it to collinscalculusclass@gmail.com by Sunday evening. Whatever the schedule says for the week will be due by Sunday. There will be 3 exams, worth 20% each, with exam 1 covering logic, set theory, functions and number theory; exam 2 covering counting and graph theory; and exam 3 covering recursion and block design.

GRADING WILL BE BASED ON THE FOLLOWING PERCENTAGES:

HW	40%
3 EXAMS	60%

LETTER GRADES WILL BE ASSIGNED AS FOLLOWS:

90-100	A
80-89	B
70-79	C
60-69	D
0-59	F

## IMPORTANT DATES

To withdraw without a W, the deadline is Feb. 7th. The last day to withdraw from the course is April 10th.

## ATTENDANCE

You are responsible for the material covered each week. Exam make-ups will only be given in extreme emergencies and only if you contact me BEFORE the exam begins. It is the student's responsibility to drop all classes in which he/she is no longer attending. It is at my discretion to withdraw a student after the add/drop deadline due to excessive absences. Students who remain enrolled beyond the withdrawal deadline will receive an evaluative letter grade in this class. This is an SDCCD class and it is critical you read and understand the following references. They can be found in the college catalog online or at the Office of Student Affairs (Room H-500).

Policy 3100: Student Rights, Responsibilities, and Administrative Due Process

Procedures 3100.1: Student Grievance Procedures

Procedures 3100.2: Student Disciplinary Procedures

Procedures 3100.3: Honest Academic Conduct Procedures

### **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 as soon as possible so that I can adapt methods, materials or tests as needed to provide for equitable participation.