

MATH 31            SECTION MP1            CRN 47291

Instructor:        Dr Zack Judson

Office Hours:     MWF    11:30-12:20    Office: E36b

TTh            11:30-12:20    Zoom: <https://fhda-edu.zoom.us/j/94927146397>

Email: judsonzack@deanza.edu

(Note: I will not answer Math questions over email)

**Prerequisite:** Math 109, 114 or 130 or placement

### **Required Materials**

1. XYZHomework
2. Scientific Calculator (i.e. TI 30X-IIs) [NO graphing calculators or cellphone]

### **Accommodations**

Those of you who need additional accommodations, due to disability, campus-related activities, or some other reason, please meet email me during the first week of class to discuss your options.

### **Midterms**

This course will consist of 4 midterms, each of which will represent 10% of your grade. These exams will be taken during class. The bulk of your grade on the exam will be based on the work you show to justify your answers.

The intent of the midterms is to be able to learn from them. On the 6th through 10th Fridays of the quarter, you will have the opportunity to retake a midterm score that you are not happy with. This retake will take place the hour before class (7:30 to 8:20). In order to retake an exam you must submit test corrections to me by the Wednesday prior to the Friday in question. The retake will only replace your exam score if it is higher than the original exam.

### **Homework**

The homework will be assigned at the end of class on the day that the corresponding topic is covered. It will be due before midnight on the following day. This will give you the opportunity to ask questions about the homework at the start of the next day's group work. Homework will be worth 10% of your grade. The homework will be delivered through an online system called XYZHomework. As this is an MPS class, we ask that you do not purchase before the start of class. Our course number is **32782**.

## Cooperation

Unfortunately, most students have experienced at least one math class where everyone worked independently in their own heads. This is not mathematics. At its core mathematics is about the communication of precise ideas. Toward this end cooperation will represent 10% of your grade. Your cooperation grade will consist of daily group work assignments, occasional discussion days and two math labs.

In my experience, every math class understands the lecture right up until the point they have to work through a problem. To help facilitate this process, we will begin each class session by breaking into groups and working together on the white boards. We will be working on developing the skills we learned in the previous lecture. These group work assignments will be graded based on your collaborations during class time. Each group work will be worth 2 points.

Unfortunately, reflex skills will not be enough to help you do well in Calculus. You will need to learn to work on deeper problems. To help facilitate this process, we will have discussions. These discussions will either cover mathematical models or reviewing for exams. The discussion will become available the day before we cover it in class. You will be asked to do some amount of preparatory work before the discussion day. This will be worth 3 points. On the day of the discussion we will work together on the boards to try and figure out how to apply the knowledge we learned in lecture. This collaborative work will be worth 5 points.

To help prepare you for the complexity of some calculus assignments, we will have two math labs this quarter. The intention behind lab assignments is to encourage students to think more deeply about the material. These labs will be worked on in groups of three or four. You will need to work on them outside of class to complete them. Although every student must turn in their own lab assignment, you will be graded as a group on the assignment. No late lab assignments will be accepted. Each Lab will be graded out of 100 points.

Approximately two days before the lab is due, we will have a lab check-in day. A rough draft of the lab will be due the night before the Lab Check-In. The rough draft will be worth 10 points and will be graded solely based upon attempting all parts of the exam and asking meaningful questions about those parts you do not know how to do up to that point.

In addition each Lab will have a Lab discussion worth 10 points where you will document your interactions with your group. This discussion will be graded both for the work you share with the group and for your responses to the posts of other group members. You are more than welcome (and even encouraged) to interact with your group in other ways; however, you need to make sure to document this interaction on your discussion board. This documentation needs to show what interactions are happening in your group. Bad example: "we met in zoom today and did the lab" Good example: attach a transcript of the meeting.

Although the components of one lab add up to 120 points, these will be scaled to 30 points when computing your cooperation grade.

## Final Exam

A two-hour comprehensive final exam will be given on Wednesday, June 22, from 7 to 9 am. The final will follow the same format as our midterms. The final will represent 20% to 40% of your grade. (see quizzes below)

## Quizzes

Quizzes will represent up to 20% of your grade. However, all points that are missed on quizzes will be replaced by your final. For example if you average a 60% across all quizzes and then score a 75% on the final, you will earn back 75% of the points you had missed on quizzes so that your final quiz score will be a 90%. In this way quizzes are designed to be a place where you can make mistakes and learn from them.

As with your midterms, you are expected to do your own work on quizzes. However, unlike midterms, quizzes will be given asynchronously. On the day a quiz is assigned, you can click on the quiz at any time after class. The quizzes are designed to be completed in 20 minutes. You will have 60 minutes to answer the questions and upload a pdf of your solutions. **Due to the fact that all missed points are covered by the final, quizzes will only be graded if they are submitted as a single pdf through the CANVAS quiz.** Each quiz will be graded out of 20 points.

In addition to these more traditional quizzes, there will also be a lab check-in quiz following each days lecture. Each of these will only be worth 3 points and 2 of the 3 questions will be graded on whether or not you tried to answer the question. (The remaining question will still be graded on your comprehension of the lecture.)

**Student Learning Outcome(s):**

\* Investigate, evaluate, and differentiate between algebraic and transcendental functions in their graphic, formulaic, and tabular representations.

\* Synthesize, model, and communicate real-life applications and phenomena using algebraic and transcendental functions.