

Math 1A-27473 Calculus I (5 units)

Instructor: Christopher Bradley

Email: bradleychristopher@fhda.edu

Classroom: G2

Class times: M-TH 10:30AM-11:20AM

Student Hours: Monday: 11:35AM-12:20PM (E31a) , Tuesday: 9:35AM-10:20AM (E31a),
Wed: 2pm-4pm (E31a), Thu: 11:35AM-12:20AM (E31a), and on ZOOM by appointment

Office: Room E31a

Course Format

This is a face-to-face course, with a small portion asynchronous. I will upload worksheets, videos, discussions, etc. onto canvas for you all to complete. We will meet in Room G2 at the scheduled times, Monday through Thursday. We will spend this time together to build community, to cover course content, to work on group activities, and to engage in classroom discussions.

I hope you actively participate in this course. Math education research literature shows that working together and learning from each other will help you better understand homework problems, minimize test anxiety, and strengthen your problem-solving skills.

There may be some times when you are unable to make it to the class meetings. All the class "lecture notes" will be posted to Canvas (Note: from experience, the lecture notes alone do not translate to a good grade, so it is important to be present in class!). You should make it a point to exchange contact information with a classmate, there could be information discussed in class that does not make it to the posted notes. If you find that these missed days are adding up, please talk to me so that we may assess your situation, together.

Prerequisites

MATH 32, MATH 32H, MATH 43 or MATH 43H with a grade of C or better, or appropriate score on Calculus Placement Test within the past calendar year

Here are some skills that will help your success in the course (Don't worry, we will refresh these skills!):

- Apply the fundamental principles of algebra to the manipulation of algebraic expressions.

- Use algebraic terms, expressions, and equations to formulate and solve problems.
- Use the concepts, techniques, and skills necessary in the solution of quantitative problems arising in vocations, engineering, science, and other aspects of life.

Scope and Objectives

This course covers the fundamentals of differential calculus.

- Analyze and explore aspects of the differential calculus.
- Compute and interpret limits of functions using analytic and other methods, including L'Hospital's Rule.
- Apply the definition of continuity using limits to analyze the behavior of functions.
- Find the derivative of a function as a limit.
- Derive and use the power, quotient, product, and chain rules to differentiate functions, including implicit and parametric functions, and find the equation of a tangent line to a function.
- Graph functions using methods of calculus
- Apply the derivative to solve applications including related rate problems and optimization problems;
- Define the antiderivative and determine antiderivatives of simple functions.

Student Learning Outcomes

- Analyze and synthesize the concepts of limits, continuity, and differentiation from a graphical, numerical, analytical and verbal approach, using correct notation and mathematical precision.
- Evaluate the behavior of graphs in the context of limits, continuity and differentiability.
- Recognize, diagnose, and decide on the appropriate method for solving applied real world problems in optimization, related rates and numerical approximation.

Homework Platform

MyOpenMath (required): www.myopenmath.com. MyOpenMath is the online homework/practice program that you will use to practice concepts learned in class. Make sure to register through canvas (by clicking any assignment and following the steps.), no course number is required. (Free)

Textbook

We will be using [Calculus Volume 1, Openstax](#)

Participation

This is a critical part of the course, participating in the group work, working with your peers, struggling through the material together. We will be doing activities (worksheets, think-pair-shares, etc.). Yes, you can miss some days because life happens. However, if you find that you are missing too many class meetings, please come talk to me so that we may assess your situation together. Everyone will have to present a solution to at least one problem sometime during the 12 weeks in order to get full credit for participation.

Homework

As stated above, we will be using MyOpenMath as our online homework platform. Our homework is an integral part of our class. I encourage collaboration with other classmates on the homework. Work together, but be careful, your partner won't be able to help you during the exams! There will also be written homework, which will be graded on completeness and clarity. Rather than accepting late homework, I will drop your lowest homework assignment automatically. There are roughly 5-6 short written assignments scattered throughout the 12 weeks we have together. You will have 1 late pass for each online homework assignment, the late pass will give you another 2 days to complete the assignment.

Exams

We will have 4 exams total. Three of them will occur during the 12 weeks and the last one, our final will happen on the last day of class. The final exam will be cumulative. The tentative dates for the exams will be 10/10, 10/31, 11/21, and 12/12 (Final Exam: 9:15am-11:15am). More info on the exams will be posted in our canvas course. All 4 exams must be taken in order to pass this course. If you are unable to attend one of the midterms please make arrangements for an alternative day/time in advance.

Grading

Important Dates

Homework	20%	Last day to add: 10/6/24
Participation	10%	Last day to drop without W: 10/6/24
Quizzes	10%	Indigenous Peoples' Day: 10/11/24 (college closed)
		Veterans Day: 11/11 (college closed)
		Last day to Drop w/ W: 11/15/24
		Thanksgiving Holiday: 11/28-12/1 (college closed)
3 Exams	45% (15% each)	Final Exams: 10/9-10/13
Final Exam	15%	Last day of instruction: 12/13

Grade Percentages

Grades in the class are as follows: 90% and up is an A, at least 80% but less than 90% is a B, at least 70% but less than 80% is a C, at least 60% but less than 70% is a D and less than 60% is an F. If you are hovering around the border, getting bumped up will depend on your performance and participation (emphasis on participation) in the class.

Free Tutoring

All Math students can get tutoring at the [Math, Science & Technology Resource Center!](#) It is free, there is drop-in tutoring as well as online and workshops!

Disabilities Support Services

Students with disabilities needing reasonable accommodations are encouraged to contact DSS early in the quarter. If you think that you may have a learning disability (or physical disability), please contact DSS as soon as possible. More information is available at [Disability Support Services \(deanza.edu\)](http://deanza.edu)

Classroom Conduct

You should not be listening to music during class. You should not be texting during class. Cell phones should be turned off/silent (if you need to leave your phone on for some reason, let me know). You may not use a cell phone, smart watch or other device capable of texting or connecting to the internet during an exam.

A graphing calculator is recommended for this class, and calculator usage is generally allowed on assignments, with some restrictions.

Cheating on exams is unacceptable and will result in a grade of 0 on the exam. See the [Student Code of Conduct](#) for further college policies.

All students must comply with the college's [COVID policies and protocols](#).

FAQ

Are we allowed to use notes during the exams? Yes, you are allowed 1 page of notes, front and back. These notes can include theorems, definitions, formulas, and steps to solve certain problems. The main goal of a cheat sheet (at least in my head) is to optimize our strategies. Get rid of what we don't need and lay out what we do need and how to use it.

Will the exams be just like the lectures and the homework? For the most part. What we learn in class will be the foundation, working through the homework problems helps us fine tune our understanding and exposes us to the ins and outs of different variations of the things we learned in class. When writing the exams, I will assume that you went through the notes, completed the assignments and prepared accordingly.

Will we have review sessions before the exams? Yes, before every exam we will have a review session where we will discuss any topic, problem, or strategy.

May I come to office hours to work on the homework? Yes, I recommend you take advantage of office hours. Not only for This class, but all of your classes!

Is coming to class mandatory? Yes, it will count towards your participation.

Student Learning Outcome(s):

- Analyze and synthesize the concepts of limits, continuity, and differentiation from a graphical, numerical, analytical and verbal approach, using correct notation and mathematical precision.
- Evaluate the behavior of graphs in the context of limits, continuity and differentiability.
- Recognize, diagnose, and decide on the appropriate method for solving applied real world problems in optimization, related rates and numerical approximation.

Office Hours:

M,TH	11:35 AM	12:20 PM	In-Person	E31a
W	02:00 PM	04:00 PM	In-Person	E31a
T	09:35 AM	10:20 AM	In-Person	E31a