Math 1A: Calculus
Spring 2024 Asynchronous

Instructor: John Jimenez	**Modality:** Asynchronous
Email: jimenezjohn@fhda.edu	**Office hours (via** Zoom**):** TBD

Required Text and Recommended Materials:

- Textbook: Our (free) textbook will be Calculus Vol 1 from Openstax: https://openstax.org/details/books/calculus-volume-1. We will also use Vol 2 (link here) for some sections. Note that this book is available free in the online and PDF format. If you prefer a physical copy, that would be paid out of pocket and is available directly from the website or you can use the PDF file to print at a local printing facility (staples, office dept, a local printing shop).

- Calculator: Although not necessary for most of this course, it can sometimes be helpful to have access to some type of basic calculator. This can be a physical graphing calculator or a free online graphing tool such as https://www.desmos.com/ or https://www.wolframalpha.com/. Note that graphing calculators are not allowed on exams. TI30's or equivalent can be used on exams.

- Access to https://deanza.instructure.com/. Canvas is where all the course information will be available. Information regarding grades, lectures, resources, etc.

Goals for Students in the Course:
- To build a solid foundation for future math courses.

- To build confidence in their academic abilities in the math class and beyond.

- Be able to collaborate and discuss mathematics with classmates.

- To gain intuition behind concepts in the course.

Grading:

Midterm Exams	Homework	Project	Discussions	Final
45 %	30 %	5%	5%	15 %

Grading scale	
90-99.9% A	70-77.9% C
88-89.9 % B+	68-69.9 % D+
80-87.9% B	60-67.9% D
78-79.9% C+	≤ 59.9 F

All assignments will be online through MyOpenMath which is a free online course management and assessment system for mathematics. You will automatically be enrolled and have access to MyOpenMath through Canvas so no action is required by students.

Exams 45 %: Exams will be given throughout the quarter. See the schedule at the end of the syllabus for the dates of the exams.

Homework 30 %: Homework will be assigned at the beginning of each lecture week and will be due one week after it is assigned.

Project 5 %: There will be one project to enrich your understanding of topics studied in the course and beyond.

Discussions 5%: There will be biweekly discussions on Canvas.

Final 15 %: The final for this course will be a two-hour cumulative exam.
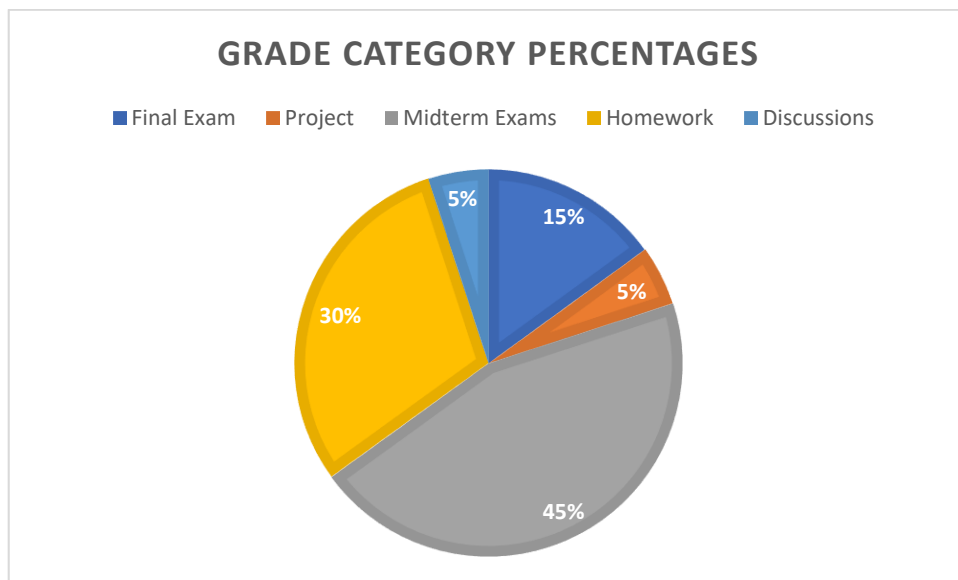

Figure 1: Grade categories for the course as a percentage of total grade.

Assignment submission guidelines: All assignments will have due dates posted but in case of an emergency I will still accept your assignment if it is not completed by the due date. If for some reason you cannot turn in an assignment, use a LatePass and turn it in as soon as possible without penalties. There is only a finite amount of LatePasses you can use so use them wisely!

Resources to Succeed in this Course:

- The MESA center located in S54 has drop-in tutoring that you should definitely make use of! https://www.deanza.edu/mesa/
- Another great place to find tutors is in Math, Science & Technology Resource Center located in S43. https://deanza.edu/studentsuccess/mstrc/

- After-hours or weekend tutoring. See the Online Tutoring page for information about NetTutor (via Canvas) or Smarthinking (via MyPortal).

- Office hours! I encourage students to ask me any questions about the course content if they wish! You can reach me via Zoom in the times listed on the first page of the syllabus. This is another great place to get help on material related to the course.

- **It is known that students who participate in tutoring, group study, or workshops for three or more hours a week succeed at much higher rates than those who do not. The students who most need the help may reluctant, but if you take the first step in seeking resources you will be glad you did.**

Disability Statement: If you have a disability related need for academic accommodations or services in this course, you will need to provide me with a Test Accommodation Verification Form (TAV form) from Disability Support Services (DSS) or the Educational Diagnostic Center (EDC). Students are expected to give a two week notice if they are in need of accommodations. For those students with disabilities, you can obtain a TAV form from their DSS counselor (408 864-8753 DSS main number) or EDC advisor (408 864-8839 EDC main number). The application process can be found here: https://www.deanza.edu/dsps/dss/applynow.html

To protect students GPA, you may be dropped from the course if:

- You miss the first day of class.
- You have multiple missing assignments including the first week assignments.
- You do not interact with Canvas regularly to keep up with the course.
- Failure to communicate why you miss a class meeting or miss an assignment deadline.

Note that if for any reason you feel like you may need to drop the course, it is your responsibility to do so.

Academic Integrity: If it is suspected that academic dishonesty is taking place on an assignment, the college will be notified and will result in a failing grade on the assignment or a failing grade in the class. For further information on academic integrity please see https://www.deanza.edu/policies/academic_integrity.html.

Tentative Course Schedule:

Week	Section
1	Some review Ch 1 Limits 2.2 Limit laws 2.3 Continuity 2.4
2	Tangent Lines 2.1 Derivatives 3.1-3.2
3	Polynomial and exponential derivatives 3.3 Product and quotient rules 3.3
4	**Exam 1 Monday April 29th** The derivatives as rates of change 3.4 Trig derivatives 3.5 Linear approximation and differentials 4.2
5	Chain rule 3.6 Related rates 4.1 Implicit differentiation 3.8 Newton's Method 4.9
6	Derivatives of inverse functions 3.7 Derivatives of logarithmic functions 3.9 Maxima and minima 4.3 Infinite limits and horizontal asymptotes 4.6
7	**Exam 2 Monday May 20th** What Derivatives Tell Us about the Shape of a Graph 4.5 L'Hôspital's Rule 4.8
8	Curve sketching 4.6
9	Optimization 4.7
10	**Exam 3 Monday June 10th** Antiderivatives 4.10
11	Hyperbolic functions 6.9 in Openstax Vol 2 Parametric equations Section 7.1-7.2 in Vol 2 Openstax Mean Value Theorem 4.4
12	Finals Week: Final is on Monday June 24th

Important Dates:

Date	
April 8	Spring classes begin
April 19	Last day to add classes
April 20	Last day to drop classes without a W
May 25-27	Memorial Day Weekend – no classes
May 31	Last day to drop with W
June 19	Juneteenth Holiday – no classes
June 24	Finals Week
June 29	Graduation

For a more comprehensive list of important dates see http://www.deanza.edu/calendar/.

Course Description: Fundamentals of differential calculus. (5 units)

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:

      T,TH   09:00 AM   11:00 AM   Zoom