MATH 1A: CALCULUS

Fall 2021

Instructor:	John Jimenez	**Class Time:**	MTWR 9:30 – 10:20a
Email:	jimenezjohn@fhda.edu	**Office Hour:**	T Th 12:20 – 1:30 p
			W 10:20 – 11:30 a
			and 3:45 – 4:35 p

Required Text and Recommended Materials:

- Textbook: Calculus: Early Transcendentals, 9th Edition, J. Stewart.

- Calculator: Although not necessary for most of this course, it can sometimes be helpful to have access to some type of graphing calculator. This can be a physical graphing calculator or some kind of free online graphing tool such as https://www.desmos.com/ or https://www.wolframalpha.com/.

- Access to https://deanza.instructure.com/. Canvas is where all of 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 calculus 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:

3 Midterm Exams	Quizzes	Project	Discussions	Final
40 %	35 %	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

Exams 40 % : There are 3 midterm exams. The lowest midterm exam score will be dropped.

Quizzes 35 % :

- Weekly quizzes will be turned in at the end of the week as a packet composed of two parts. One of those parts is a collection of problems assigned at the end of the week. The other part is a submission of homework which is assigned after each class.
- The quizzes will be graded on neatness, completeness, correctness, and effort.

Projects 5 % : There will be one project to enhance your understanding of topics studied in the course.

Discussions 5 % : Each week there will be a discussion board in which you can interact with your classmates about the course content. Here is where we will try to build a sense of community and interact with others over the material and serve as a place for participation and collaboration.

Final 15 % : The final for this course will be a two-hour cumulative exam. The final exam time for this class is Monday 12/06/2021 from 11:30 AM to 1:30 PM.
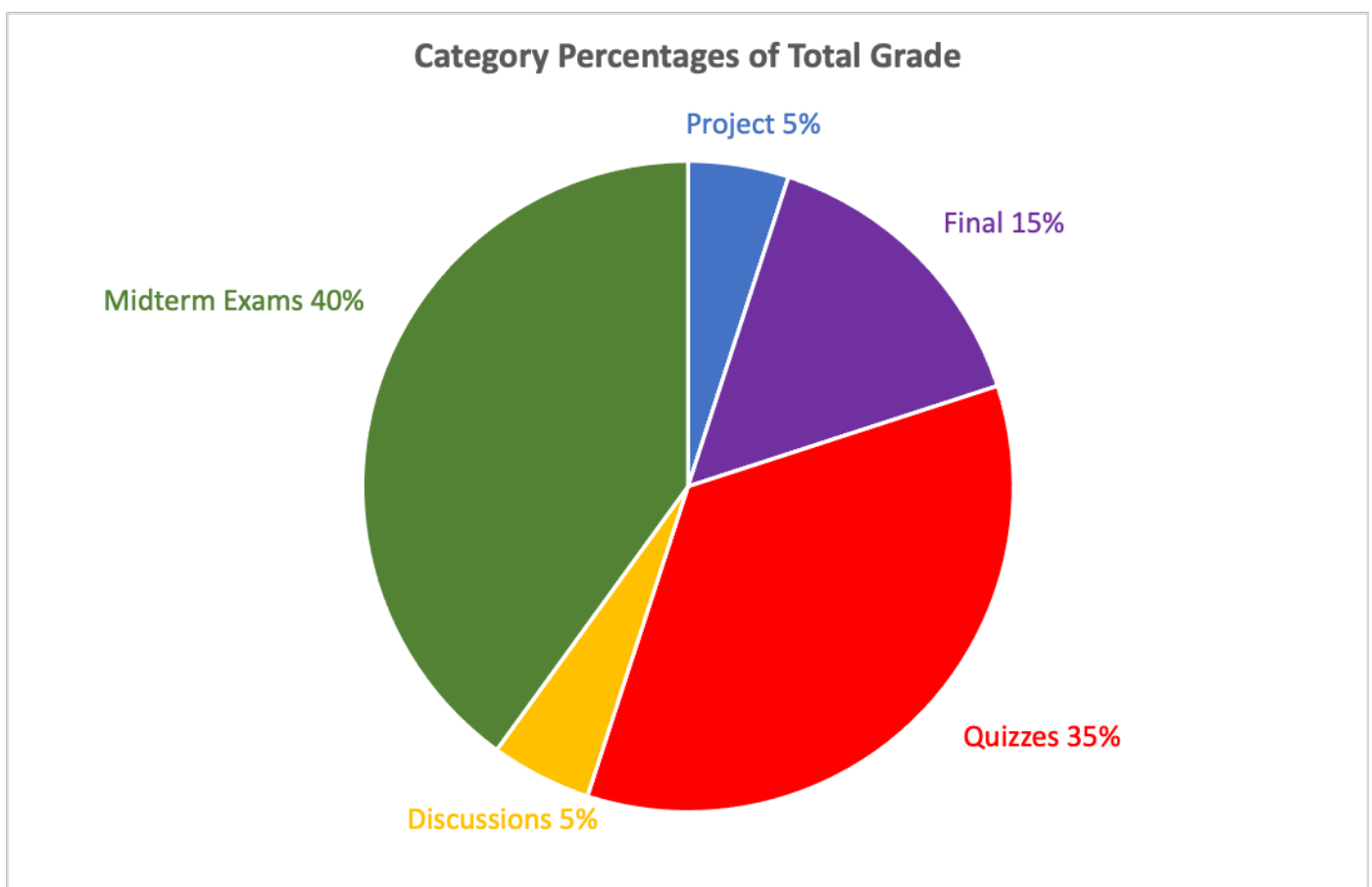

Figure 1: Grade breakdown for the course as a percentage.

Assignment due dates: Due dates will be clearly given on the assignments in Canvas. If for some reason you cannot turn in an assignment when it is due, turn it in as soon as possible. This is to avoid falling behind with the material which can be detrimental toward your experience in any STEM course.

Attendance: This class will be synchronously held via Zoom (link posted in Canvas) so attending means being present for the courses allotted time during the zoom sessions. As is the case with any class, being present is crucial and necessary for doing well in the course. Note that a student may be dropped from the course if participation is low.

You may be dropped from the course if:

- You miss 2 homework sets and or quizzes in a row.
- You do not interact with Canvas for a week.
- You miss 2 full weeks of synchronous meetings without contacting me prior to missing those meetings.

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

How to Succeed in this Course:

- The Student Success Center tutors and workshops area a great place to start! Watch the SSC Welcome Video to learn more.

  Tutoring: Go to http://deanza.edu/studentsuccess and click to join a Zoom tutoring room during open hours.

  Workshops: Attend a Skills Workshop, a content-specific math/science workshop, an Accounting chapter review workshop, or a Listening and Speaking workshop.

  Resources: Join the SSC Resources Canvas site to see content and learning skills links.

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

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.

- I encourage students to make use of office hours! This is another great place to get help on material related to the course.
- The discussion boards will be a great place to collaborate with classmates regarding the course content.

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

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.

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

Tentative Course Schedule:

Week	Section
1	Some review Ch.1 Tangent Lines 2.1, Limits 2.2
2	Limit laws 2.3, Def of Limit 2.4 Continuity 2.5, Derivatives 2.7, 2.8
3	**Exam 1** Polynomial and exponential derivatives 3.1 Product and quotient rules 3.2
4	Trig derivatives 3.3 Logarithmic differentiation 3.6 Linear approximation and differentials 3.10 Newton's Method 4.8
5	**Project 1 assigned** Chain rule 3.4 Implicit differentiation 3.5 Related rates 3.9
6	**Exam 2** Hyperbolic functions 3.11 Parametric equations 10.1, 10.2
7	Infinite limits and horizontal asymptotes 2.6 L'Hôspital's Rule 4.4 Maxima and minima 4.1
8	Maxima and minima 4.1 Mean Value Theorem 4.2 Curve sketching 4.3 - 4.5
9	Curve sketching 4.3 - 4.5 **Exam 3**
10	**Project 1 due** Optimization 4.7
11	**Project 2 Due** Optimization 4.7 Antiderivatives 4.9
12	Monday 12/06/2021 from 11:30 AM to 1:30 PM

Important Dates:

Date	
09/20	First day of fall quarter
10/02	Last day to add classes
10/ 03	Last day to drop classes without a W
11/11	Veterans Day holiday: Campus closed
11/12	Last day to drop class with "W"
11/25-11/28	Thanksgiving holiday: Campus closed
12/21-12/25	Finals Week. Final Exam Time for this Class: Monday 12/06/2021 from 11:30 AM to 1:30 PM

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

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.