Math 32: Precalculus I Winter 2023

Instructor:John JimenezClass Modality: Asynchronous (Online)Email:jimenezjohn@fhda.eduOffice Hours: MTWR 9:00 – 9:50a

Required Text and Recommended Materials:

• (Free) Online textbook: Calculus Volume 1, Strang: https://openstax.org/details/books/calculus-volume-1

- 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 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 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:

Midterm Exams	Homework	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 %: Midterm exams will be given throughout the quarter. See the schedule at the end of the syllabus for the dates of the midterms. The lowest midterm score will be dropped.

Homework 35 %: 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 some informal discussion board topics to build a sense of community.

Final 15 %: The final for this course will be a two-hour cumulative exam. The final exam time for this class is on Tuesday 03/28/2023 from 1:45 PM to 3:45 PM.

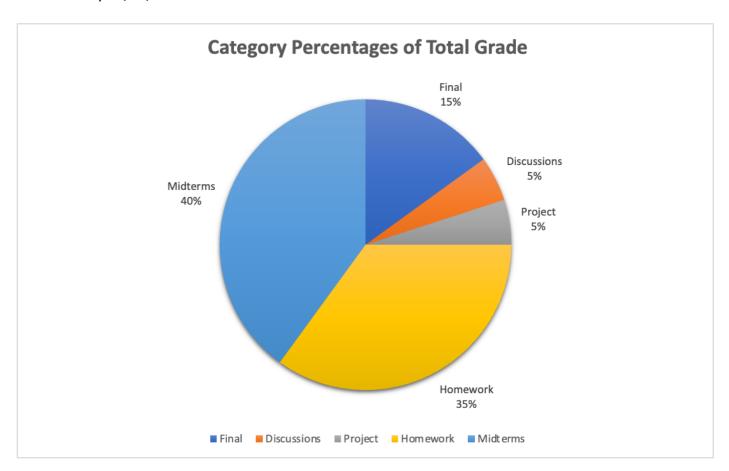


Figure 1: Grade categories for the course as a percentage of total grade.

Assignment submission recommendation: All assignments will have due dates posted but 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, 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).

You may be dropped from the course if:

- You have multiple missing assignments.
- You do not interact with Canvas regularly to keep up with the course.
- Failure to communicate why you miss a synchronous 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.

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:

For tutoring through The Student Success go to http://deanza.edu/studentsuccess and click to join a Zoom tutoring room during open hours.

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

Resources: Join the <u>SSC Resources Canvas site</u> to see content and learning skills links.

After-hours or weekend tutoring: See the <u>Online Tutoring</u> 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 ask me any questions about the course content if they wish! You can reach me from 9:30-10:20a M-Th via Zoom. This is another great place to get help on material related to the course.

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.

Tentative Course Schedule:

Week	Section
1	Areas and Distances
	The Definite Integral
	The Fundamental Theorem of Calculus
2	Indefinite Integrals and the Net Change Theorem
	The Substitution Rule
	Areas Between Curves
3	Volumes
	Volumes by Cylindrical Shells
	Work
	Average Value of a Function
4	Project 1 Assigned
	Integration by Parts
5	Trigonometric Integrals
	Trigonometric Substitutions
6	Integration of Rational Functions by Partial
	Fractions
	Approximate Integrals
	Exam 1
	Project due
7	Improper Integrals
	Arc Length
	Area of a Surface of Revolution
	Applications to Physics and engineering
8	Probability
9	Modeling with Differential Equations
	Direction Fields and Eulers' Method
10	Separable Equations
	Models for Population Growth
	Exam 2
11	Liner Equations
	Project 1 Due
12	Final Exam Monday 6/21 from 11:30 AM to 1:30
	PM

Important Dates:

Date	
Jan 16	Martin Luther King Jr. Holiday – No classes.
Jan 22	Last day to drop without a W.
Feb 17-20	Presidents' Holiday – No classes.
March 3	Last day to drop classes with a W.
March 27-31	Finals Week: Final Exam for this course in on Tuesday 03/28/2023 from 1:45 PM to 3:45 PM.

Course Description: This cours	se examines the fur	ndamentals of inte	gral calculus. (5 U	nits)

Student Learning Outcome(s):

Office Hours:

M,T,W,TH 09:00 AM 09:50 AM Zoom

^{*}Analyze the definite integral from a graphical, numerical, analytical, and verbal approach, using correct notation and mathematical precision.

^{*}Formulate and use the Fundamental Theorem of Calculus.

^{*}Apply the definite integral in solving problems in analytical geometry and the sciences.