Math 1B: Calculus Winter 2022

Instructor: John Jimenez	Time: M W	10:30-12:20p
		(Mandatory)
	T Th	11:30-12:20 p
		(Optional)
Email: jimenezjohn@fhda.edu	Office Hour	M,T,Th
		12:50-1:40p
		W
		1:30-2:20 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 <u>https://www.desmos.com/</u> or <u>https://www.wolframalpha.com/</u>.
- 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 on Wednesdays of each week as a packet composed of two parts. One of those parts is a collection of exercises 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 % : There will be several joint assignments for this LinC section in the form of discussions. You will find these discussions on Canvas.

Final 15 % : The final for this course will be a two-hour cumulative exam. The final exam time for this class is Wednesday 03/23 from 9:15 AM to 11:15 AM.



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. It is up to my discretion if I will accept the late work or not given the circumstances.

Attendance: This class will be synchronously held via Zoom on Monday and Wednesday so attending means being present for the courses allotted time during the zoom sessions. For the days that we do not meet, you will be given other materials to work on outside of class. You will see these materials in the weekly course module.

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 do not complete the first discussion assignment.
- 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. 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.

How to Succeed in this Course:

Counseling: Maurice Canyon is the counselor for this LinC community. His duties include:

- Choosing classes to reach your academic goal, such as earning a degree or certificate or transferring to a university.
- Creating an educational plan.
- Finding resources on campus, such as tutoring or other academic assistance.
- Exploring career options.

Please use the following link to make an appointment with him: <u>https://www.deanza.edu/umoja/our-counselor.html (Links to an external site.)</u>

Tutoring: We have dedicated tutors for this LinC community, information will be posted on Canvas. Wei Shao <u>shaowei@student.deanza.edu</u> Monday 11:30-12:30, Tuesday 8-10pm

Wei's Zoom Link

Meeting ID: 858 8795 6645

Passcode: t1V1KE

Olivia Wang <u>vitongwang0256@gmail.com</u> Wednesday 8-10pm

Olivia's Zoom Link TBD

The Student Success Center tutors and workshops area a great place to start also! Watch the <u>SSC Welcome</u> <u>Video</u> to learn more.

Tutoring: Go to <u>http://deanza.edu/studentsuccess</u> 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 SSC Resources Canvas site 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 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: <u>https://www.deanza.edu/dsps/dss/applynow.html</u>

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

Tentative Course Schedule:

Section
5.1 Areas and Distances
5.2 The Definite Integral
5.3 The Fundamental Theorem of Calculus
5.4 Indefinite Integrals and the Net Change
Theorem
5.5 The Substitution Rule
6.1 Areas Between Curves
Exam 1
6.2 Volumes
6.3Volumes by Cylindrical Shells

	Project 1 assigned
	6.4 Work
4	6.5 Average Value of a Function
	7.1 Integration by Parts
5	7.2 Trigonometric Integrals
	7.3 Trigonometric Substitutions
6	7.4 Integration of Rational Functions by Partial
	Fractions
	Exam 2
	7.7 Approximate Integrals
	7.8 Improper Integrals
	Project 1 due
7	8.1 Arc Length
	8.2 Area of a Surface of Revolution
	8.3 Applications to Physics and engineering
8	8.5 Probability
9	Exam 3
	9.1 Modeling with Differential Equations
	9.2 Direction Fields and Euler's Method
10	9.3 Separable Equations
	9.4 Models for Population Growth
11	9.5 Liner Equations
12	Final Exam Monday 6/21 from 11.30 AM to 1.20
14	$\frac{1}{2} = \frac{1}{2} = \frac{1}$

Important Dates:

Date	
01/03	First day of winter quarter
01/15	Last day to add classes
02/25	Last day to drop classes with a W
02/18-02/21	Presidents' Holiday (no class)
06/21-06/25	Finals Week. Final Exam Time for this Class: Wednesday 03/23 from 9:15 AM to 11:15 AM

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

Student Learning Outcome(s):

*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.