

Instructor:	Lin Zhang <p style="text-align: right;">Email: zhanglinlin@fhda.edu Canvas: https://deanza.instructure.com/</p>
Class Time	MTWTh 3:00 – 5:15PM Synchronous Zoom Meeting
Office Hour	MTWTh 20 minutes before class
Text:	Calculus Volume 1 (Openstax) Please follow the link and download the PDF file to your computer. MyOpenMath is a free homework platform embedded in Canvas.
Equipment:	Graphing Calculator is recommended (TI 83plus , ...) During lesson, you can use your phone: TI Emulator Apps For iPhone: GraphNCalc83 (free with ads) For Android: Graphing Calculator plus 84 83 (\$2.99)

1. Prerequisite:

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

2. Course Objective

- 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.

2. 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.

3. Drop Policy:

Since this is a synchronous online class, your participation is integrated into your grade. If you don't participate in the inclass assignment submission by the end of **Sunday of the first week**, you will be dropped from the class. **It is always YOUR RESPONSIBILITY to drop** the class if you feel like you can't continue for any reason.

4. Tutoring

The Math, Science, and Technology Resource Center (**S43**) provides free online tutoring **Monday – Thursday 10AM – 5PM**. For more information, go to www.deanza.edu/studentuccess/mstrc. You can also use “NetTutor” link on the navigation in Canvas or attend my office hour. Email me for appointments if you want to meet at alternative time.

5. Academic Integrity:

Your work must reflect what you know based on your own knowledge and thought.

Referencing or copying another student's solutions, or searching answer online during tests are considered cheating. Violation of this policy will result in the student receiving ZERO credit for the entire assignment or test. Further action may be taken depending on the circumstance.

Also, each incident of cheating will be reported to the Dean of the Physical Science, Mathematics and Engineering Division. Please see the De Anza College's page on [Academic Integrity](#).

6. Disability Support Services

Students with disabilities needing reasonable accommodation should inform me in the beginning of the quarter. To begin the reasonable accommodations process, I will need to fill out a request form from the Disabilities Support Services (DSS). For more information, please visit the DSS office at SCSB 141, call (408) 864-8753 / (408) 864-8748 TTY, or go to www.deanza.edu/dss.

7. Grade:

All grades will be posted on Canvas as soon as they become available. It is your responsibilities to check Canvas at least once a week to monitor your grades for the class.

In Class (drop 2)	10%	A: 90-100%
Homeworks (drop 1)	15%	B: 80-89%
3 Quizzes (no drop)	9%	C: 70-79%
3 midterms	48%	D: 60-69%
<u>Final Exam</u>	<u>18%</u>	F: 0-59%
Total	100%	

In Class Participation

This is a **synchronous online class** so students are expected to attend Zoom meeting regularly and on time. Please email me if you can't attend the first week of class. We meet on [Zoom](#) **Monday, Tuesday, Wednesday and Thursday 3:00 - 5:15PM**. This is NOT an asynchronous online class where students complete lessons on their own time. Your Zoom meeting participation is integrated into your course grade. You will be graded mostly by effort, and some by correctness.

Two lowest scores will be dropped for overall grade calculation at the end of the term.

Homework:

Homework assignments are assigned from MyOpenMath test bank. You need to submit your answers to **MyOpenMath** (embedded in **Canvas**). Even I am not collecting work, you are supposed to work out the problems on your own paper.

Late Work Policy

Each student are given **6 late passes (5-day extension each)** this quarter. After a homework assignment is due, you should see a "late pass" button in the description of the assignment. If an assignment is due on 1/12, using one late pass will extend the due date to 1/17. After using all your late passes, you can complete an assignment in "**Practice**" mode, and there is a **20% penalty** when I record your grade later.

Midterms and Final

Three midterms and **one final exam** will be held on dates indicated in the class calendar. Every test counts. The lowest midterm can be replaced by the average of the other two mid-terms and the final exam at the end of the term.

- You must have a working camera so I can proctor the test. Please find a location that have the right equipment (like school or public library) to take the test if you don't have it at home. Position your detached webcam or mobile device at a distance so that the instructor can see your hands and whole workspace.
- You need to have an actual TI calculator.
- Click on share Screen and choose **SCREEN** for Windows and Desktop for Mac. Make sure you share the whole screen, not just an app.

More details about testing set up will be explained first day of class.

Week	Topics	Notes
1 6/29 – 7/2	1.1 Function, domain and Function Notation	
	2.1 Slope of secant and tangent	
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	2.2 Limit of a Function	
	2.3 Limit Laws (Quiz 1)	
	2.4 Continuity 3.1 Definition of Derivative	
2 7/6 – 7/9	3.2 Derivative Function	Monday, July 7th last day to add or drop with no record.
	3.3 Differentiation Rules	
	1.3 Unit Circle and Trig Functions	
	3.5 Derivatives of Trig	
	Test 1 (2.1 – 2.4, 3.1, 3.2)	
3 7/13 – 7/16	1.4 Function Composition	
	3.6 Chain Rule	
	1.4 Inverse Functions	
	3.7 Derivative of Inverse	
	3.8 Implicit Differentiation (Quiz 2)	
	3.9 Derivatives of Exp and Log 4.1 Related Rates	
4 7/20 – 7/23	4.1 Related Rates	
	4.2 Linear Approximations	
	4.3 Absolute Max and Min	
	4.5 Sketch functions	
	Test 2 (3.3 – 3.8, 4.1)	
5 7/27 – 7/30	4.5 Sketch functions	Wednesday July 30th last day to withdraw
	4.6 Limits at Infinity	
	4.8 L'Hopitals' Rule	
	4.8 L'Hopitals' Rule (Quiz 3)	
	4.7 Applied Optimization 4.9 Newton's Method	
6 8/3 – 8/6	Test 3 (4.2 – 4.8) Tuesday	
	4.10 Antiderivatives	
	7.1 Parametric Curves	
	7.2 Calculus of Parametric Curves	
	Final Exam Thursday	

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- 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:

Zoom M,T,W,TH 2:40 PM - 3:00 PM