

MATH D001A – Calculus I

Fall 2026 – De Anza College

Tuesday/Thursday, 11:00 AM–1:15 PM
MLC 105

Instructor:	Hao Thai (pronounced “How”)
E-mail:	thaihao@fhda.edu
Classroom:	MLC105
Class Meetings:	Tuesday/Thursday, 11:00 AM–1:15 PM
Office Hours:	Tuesday/Thursday, 10:00 AM–11:00 AM and 1:15 PM–2:25 PM, in Room S55, or via Zoom by appointment.
Units:	5 units
Grading Method:	This course is graded using a letter grade system. All exams and the final exam will be graded through Gradescope . If you have not yet enrolled in the course on Gradescope, please use the enrollment code 44JN7V .
Course Dates:	September 21, 2026 – December 11, 2026
Final Exam:	Tuesday, December 8, 2026, 11:30 AM–1:30 PM
Textbook:	James Stewart, <i>Calculus: Early Transcendentals</i> , 8th Edition, Cengage Learning, 2016.
Canvas:	Course announcements, assignments, handouts, grades, and other materials will be posted on Canvas. Students should check Canvas regularly.

Course Description.

Math D001A covers the fundamentals of differential calculus. The course develops the concepts of limits, continuity, differentiation, and applications of derivatives.

Topics include tangent lines and rates of change, limits and continuity, the derivative, differentiation rules, implicit differentiation, related rates, linear approximations, maximum and minimum problems, the Mean Value Theorem, curve analysis and sketching, L'Hospital's Rule, optimization, and antiderivatives.

The course includes algebraic, trigonometric, exponential, logarithmic, and hyperbolic functions.

Emphasis will be placed on conceptual understanding, computational skills, mathematical reasoning, correct notation, and the interpretation of calculus in applied problems.

Prerequisite.

MATH D032, MATH D032H, MATH D043, or MATH D043H with a grade of C or better, or an appropriate score on the Calculus Placement Test within the past calendar year.

Students are expected to have a working knowledge of algebra, functions and graphs, exponential and logarithmic functions, and trigonometry.

Student Learning Outcomes.

Upon successful completion of the course, students should be able to:

1. Analyze and synthesize concepts involving limits, continuity, and differentiation using graphical, numerical, analytical, and verbal approaches.

2. Use correct notation and mathematical precision when communicating calculus concepts and solutions.
3. Evaluate the behavior of functions and graphs in the context of limits, continuity, and differentiability.
4. Interpret the derivative as the slope of a tangent line and as an instantaneous rate of change.
5. Compute derivatives of algebraic, trigonometric, exponential, logarithmic, and hyperbolic functions.
6. Apply differentiation rules including the Product Rule, Quotient Rule, Chain Rule, implicit differentiation, and logarithmic differentiation.
7. Recognize and select appropriate methods for solving applied problems involving related rates, numerical approximation, curve analysis, and optimization.
8. Apply the Extreme Value Theorem, Rolle's Theorem, and Mean Value Theorem appropriately.
9. Use first and second derivatives to analyze and sketch the graphs of functions.
10. Find basic antiderivatives and solve elementary initial-value problems.

Class Format.

Class meetings will consist of lecture, worked examples, problem-solving activities, discussion, and occasional individual or group work.

Calculus is learned by actively doing mathematics. Students should come prepared to participate, ask questions, and work through problems rather than simply copy examples from the board.

Attendance and Participation.

Regular and punctual attendance is strongly recommended.

Because De Anza College operates on the quarter system, the course moves quickly. Missing one class may mean missing several important concepts or techniques.

Students are responsible for all material, assignments, announcements, and schedule changes made during an absence.

Homework.

Homework will be assigned through **Canvas** and completed online using **WebAssign**. You will generally have **one week** to complete each assignment. Students are encouraged to begin early so there is time to ask questions or resolve technical issues.

Mathematics requires practice. Completing homework consistently is one of the most important ways to prepare for quizzes and exams.

Students are encouraged to discuss mathematics with classmates, but each student must understand and be able to reproduce his or her own submitted work.

Quizzes.

Short quizzes will be given periodically during the quarter. Quizzes will generally cover recently completed material and are intended to help students stay current with the course.

The two lowest quiz scores will be dropped when calculating the final course grade. This policy is intended to provide flexibility for occasional absences, illness, emergencies, or an unusually poor quiz performance.

Because the two lowest quiz scores are automatically dropped, **there will be no make-up quizzes**. If you miss a quiz for any reason, the missed quiz will receive a score of zero and may count as one of your two dropped quiz scores.

Exams.

There will be three midterm examinations and one comprehensive final examination.

Assessment	Approximate Coverage
Exam 1	Sections 2.1–2.8: Limits, Continuity, and Derivatives
Exam 2	Sections 3.1–3.6 and 3.9–3.11: Differentiation Rules and Applications
Exam 3	Sections 4.1–4.5, 4.7, and 4.9: Applications of Differentiation and Antiderivatives
Final Exam	Comprehensive – all required course material

Final Examination: Tuesday, December 8, 2026, 11:30 AM–1:30 PM.

Midterm Exam Replacement and Make-Up Policy.

There are **no make-up midterm exams**. This policy is designed to avoid the need to arrange a separate make-up examination when a student misses a midterm because of illness, an emergency, or another unexpected circumstance.

At the end of the quarter, **your lowest midterm exam score will be replaced by your highest midterm exam score**, provided that you complete the comprehensive final examination.

This replacement policy is intended to provide flexibility for **one missed midterm or one unusually low midterm performance**. Therefore, students should not expect a separate make-up examination for a missed midterm.

If more than one midterm is missed because of serious or extraordinary circumstances, please contact the instructor as soon as possible.

The final examination cannot be dropped or replaced. Students are expected to take the comprehensive final examination at the officially scheduled time.

Exam Policies.

Unless otherwise announced, exams will be closed-book and closed-note.

Students must show appropriate mathematical work and reasoning to receive full credit. A correct answer without sufficient supporting work may receive reduced credit.

Calculator policies will be announced before each examination.

Phones, messaging devices, unauthorized websites, artificial intelligence tools, and computer algebra systems may not be used during quizzes or examinations unless specifically authorized.

Grading.

The course grade will be determined as follows:

Homework	10%
Quizzes	15%
Exam 1	15%
Exam 2	15%
Exam 3	15%
Final Exam	30%
Total	100%

The following grading scale will be used:

A	93–100%	A–	90–92.9%	B+	87–89.9%
B	83–86.9%	B–	80–82.9%	C+	77–79.9%
C	70–76.9%	D	60–69.9%	F	Below 60%

Academic Integrity.

Students are expected to follow De Anza College policies regarding academic integrity.

Work submitted for individual credit must represent the student's own understanding.

Collaboration is encouraged when studying, but unauthorized assistance during quizzes and examinations is prohibited.

Tools such as ChatGPT, WolframAlpha, Symbolab, Photomath, or similar systems may be used as learning aids outside assessments when permitted by the instructor. They should be used to support understanding rather than replace mathematical reasoning.

Academic Accommodations.

Students who require academic accommodations should contact De Anza College Disability Support Programs and Services (DSPS).

Students should notify the instructor of approved accommodations as early as possible so appropriate arrangements can be made.

Getting Help.

Please ask for help early. Students are encouraged to ask questions during class, attend office hours, work with classmates, and use De Anza College tutoring and academic-support resources.

Tentative Course Schedule

MATH D001A – Calculus I – Fall 2026

The schedule below is tentative and may be adjusted according to the pace and needs of the class.

Week	Date	Sections and Topics
1	Tue Sep 22	2.1–2.2: Tangent and velocity problems; limits of functions; tables, graphs, and one-sided limits.
	Thu Sep 24	2.3: Limit Laws; direct substitution; algebraic techniques for evaluating limits.
2	Tue Sep 29	2.4: Precise Definition of a Limit; ϵ - δ reasoning and examples.
	Thu Oct 1	2.5: Continuity; discontinuities; Intermediate Value Theorem.
3	Tue Oct 6	2.6: Infinite limits; vertical asymptotes; limits at infinity and horizontal asymptotes.
	Thu Oct 8	2.7–2.8: Derivatives and rates of change; derivative as a function; higher derivatives; Chapter 2 review.
4	Tue Oct 13	Exam 1 – Sections 2.1–2.8
	Thu Oct 15	3.1: Derivatives of polynomial and exponential functions.
5	Tue Oct 20	3.2–3.3: Product Rule; Quotient Rule; derivatives of trigonometric functions.
	Thu Oct 22	3.4: Chain Rule and derivatives of composite functions.
6	Tue Oct 27	3.5–3.6: Implicit differentiation; derivatives of logarithmic functions; logarithmic differentiation.
	Thu Oct 29	3.9: Related Rates and applied rate-of-change problems.
7	Tue Nov 3	3.10–3.11: Linear approximations and differentials; hyperbolic functions; Chapter 3 review.
	Thu Nov 5	Exam 2 – Sections 3.1–3.6, 3.9–3.11
8	Tue Nov 10	4.1: Absolute and local extrema; critical numbers; Extreme Value Theorem.
	Thu Nov 12	4.2: Rolle's Theorem and Mean Value Theorem.
9	Tue Nov 17	4.3: Increasing and decreasing functions; First Derivative Test; concavity, inflection points, and Second Derivative Test.
	Thu Nov 19	4.4–4.5: Indeterminate forms and L'Hospital's Rule; curve sketching.
10	Tue Nov 24	4.7: Optimization Problems.
	Thu Nov 26	Thanksgiving Holiday – No Class
11	Tue Dec 1	4.9: Antiderivatives and initial-value problems; Chapter 4 review.
	Thu Dec 3	Exam 3 – Sections 4.1–4.5, 4.7, 4.9
12	Tue Dec 8	Comprehensive Final Examination 11:30 AM–1:30 PM
	Thu Dec 10	No Class – Final Examination Week

If Time Permits.

If the required course material is completed early, selected additional topics may be introduced, such as:

- Section 4.6 – Graphing with Calculus and Calculators

- Section 4.8 – Newton’s Method
- Section 10.1 – Curves Defined by Parametric Equations

Important Fall 2026 Dates.

- First class meeting: Tuesday, September 22, 2026.
- Last day to drop classes without a W: Sunday, October 4, 2026.
- Veterans Day: Wednesday, November 11, 2026.
- Last day to drop classes with a W: Friday, November 13, 2026
- Thanksgiving Holiday: November 26–27, 2026.
- Last regular class meeting: Thursday, December 3, 2026.
- Final Exam: Tuesday, December 8, 2026, 11:30 AM–1:30 PM.
- Fall Quarter ends: Friday, December 11, 2026.

Important Note.

This syllabus and schedule represent the instructor’s current plan. Dates, assignments, topics, and assessment dates may be adjusted when necessary. Any significant changes will be announced in class and/or posted on Canvas. If time permits after the required course material has been completed, additional topics may include graphing with calculus and calculators (Section 4.6), Newton’s Method (Section 4.8), or an introduction to parametric curves (Section 10.1).

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:

Zoom M,T,W,TH 8:40 AM - 9:30 AM