

Calculus I
MATH 1A, Section 21 – Spring 2015
MW 1:30 – 3:45pm in MLC 108
Instructor: Cheryl Jaeger Balm
Office hours: Wednesdays 12:30–1:20pm in E-37
Email: balmcheryl@fhda.edu

Textbook: *Stewart, Calculus Early Transcendentals* (7th edition)

- We will not be using WebAssign in this class.
- You are not required to bring your book to class unless otherwise instructed.

Calculators: A scientific calculator **without** graphing capabilities is required for this class and should be brought with you to each lecture. In addition you will need either a graphing calculator or access to the website desmos.com for some homework problems.

Cell phones: Cell phones, tablets, laptops and other electronic devices should not be used, seen or heard during class time unless otherwise instructed. Your cell phone is not considered a calculator for the purposes of this class, and you will not be allowed to use a cell phone or tablet during quizzes or tests. If I see or hear your cell phone or you using it during class time, I may confiscate it until the end of that class meeting.

Student Learning Outcomes (i.e. course goals):

1. Analyze and synthesize the concepts of limits, continuity, and differentiation from a graphical, numerical, analytical and verbal approach, using correct notation and mathematical precision.
2. Evaluate behavior of graphs in the context of limits, continuity, and differentiability.
3. Recognize, diagnose, and decide on the appropriate method for solving applied real-world problems in optimization, related rates and numerical approximation.

Exams: There will be three midterm exams (one-hour each, in class) and a two-hour final exam. Each of the midterm exams will focus the material covered since the previous test. The final exam will be cumulative. Books and/or notes will not be permitted during any exam. Your lowest midterm exam grade will be replaced by your grade on the final exam if that grade is better. A missed exam will count as 0 points; **make-up exams will not be given for any reason.**

Midterm exam dates:

- **Wednesday, April 29**
- **Wednesday, May 20**
- **Monday, June 15**

Final exam: Friday, June 26, 1:45–3:45pm.

Quizzes: There will be six in-class quizzes. Quizzes will be open-note, but you must show all your work on each problem in order to receive full credit. Your lowest quiz score will be dropped, so there will be five quiz grades (20 points each). **There are no make-up quizzes.**

Grade discrepancies: If you have any questions regarding your grade on any quiz or exam, you must discuss the matter with your instructor before leaving the room with the graded material. **Once the graded material has left the classroom, no grading changes will be made.**

Homework: You will be given a list of suggested homework problems. The homework will not be collected or graded. However, solving these problems is essential for keeping up with the class. You are expected to work on all the assigned problems corresponding to a lecture before you come to the next lecture.

Attendance: Students enrolled in the course are expected to be present for all class meetings. If you miss a class, you are responsible for covering the material before you return to class. You should read the corresponding section(s) of the textbook and get notes from a classmate. You are also responsible for knowing about any changes to the syllabus and/or schedule that may be announced in class.

Student resources:

- MSTRC (Math, Science and Technology Resource Center): Located in S-43, see <http://www.deanza.edu/studentsuccess/mstrc/> for hours.
- Your instructor: Make use of office hours and email. If you are not available during office hours, please make an appointment to see me at another time.
- Your classmates: Form study groups and learn from one another.
- Student Success Center: Search for SSC from the De Anza College homepage to find many, many resources to help you in this class and others.
- Online tutoring: Available 24/7 through the SSC, click on the Smart Thinking logo on the SSC page or access the online tutoring through MyPortal.
- Computer labs: Available in the basement of Learning Center West and in the S4 building.
- Learning communities

Grades: The course has a total of 600 points. Here is how each component of the course will be weighted:

- Each midterm will count for 100 points.
- The combined quizzes will count for 100 points.
- You will have a class project that will count for 50 points.
- The final exam will count for 150 points.

The grading scale for the course is as follows:

Point total	Percent	Grade
540-600	100-90	A
480-539	80-89	B
420-479	70-79	C
360-389	60-69	D

Academic Integrity: Academic dishonesty will not be tolerated. If a student is found cheating on an exam or quiz or violating any other code of academic integrity, he or she will receive a zero on the assignment and may receive failing grade for the course and/or be reported to the college. Please refer to the section on Academic Integrity in the Student Handbook.

Disability Statement: De Anza College makes reasonable accommodations for people with documented disabilities. Please notify Disability Support Services (DSS) if you have any physical, psychological or other disabilities, vision, hearing impairments or ADD/ADHD. DSS is located in the student community services building, room 141. Phone number: 408-864-8753. Website: <http://www.deanza.edu/dss/>.

Important Dates for Spring Quarter 2015:

Sun., Apr. 19: Last day to drop for a full refund or credit and with no record of grade.

Fri., May 1: Last day to request pass/no pass grade.

Fri., May 29: Last day to drop with a "W."

Mon., May 25: Memorial Day – no class.

Mon., June 22: Last day of class.

Fri., June 26: Final Exam 1:45–3:45pm

Tentative class schedule (subject to change):

	Mon	Wed
Wk 1 4/6-8	Introduction and “Review” Day 1 (1.1-1.5)	“Review” Day 2 (1.6); ROC and tangent lines (2.1)
Wk 2 4/13-15	Limits and limit laws (2.3)	One-sided limits (2.2); Continuity (2.5); Quiz 1
Wk 3 4/20-22	Infinite limits and asymptotes (2.6)	Derivatives (2.7, 2.8); Quiz 2
Wk 4 4/27-29	Polynomial and exponential derivatives (3.1); Review for exam	Exam 1 Product and quotient rules (3.2)
Wk 5 5/4-6	Trig and chain rules (3.3, 3.4)	Implicit differentiation and orthogonal trajectories (3.5); Quiz 3
Wk 6 5/11-13	Logarithmic differentiation (3.6); Applications (3.7, 3.8)	Related rates (3.9); Quiz 4
Wk 7 5/18-20	Linear approximation and Newton’s method (3.10, 4.8); Review for exam	Exam 2 l’Hôpital’s Rule (4.4)
Wk 8 5/25-27	No class	Extrema (4.1); Mean Value Theorem (4.2);
Wk 9 6/1-3	Curve sketching Part 1 (4.3); Quiz 5	Curve sketching Part 2 (4.5)
Wk 10 6/8-10	Optimization (4.7); Quiz 6	Antiderivatives (4.9); Review for exam
Wk 11 6/15-17	Exam 3 Parametric equations (10.1)	Derivatives of parametric equations (10.2)
Wk 12 6/22-26	Review for final	Final exam Friday, June 26 1:45–3:45pm

Suggested homework (subject to change)

M 4/6 “Review” day 1

1.1: 7-11, 24, 25, 31-34, 63

1.2: 4, 6, 10, 15, 19, 20

1.3: 3, 27, 28, 35, 36, 38, 41, 42, 50, 51, 55, 59

1.5: 1-4, 7-9, 25, 29

W 4/8 “Review” day 2

1.6: 1, 5-13 odd, 18, 19, 21, 23, 25, 27, 28, 30, 33, 35, 36, 39, 40, 51, 53, 57

Exam 1 Material:

W 4/8 ROC and tangent lines

2.1: 2, 3, 5

M 4/13 Limits and limit laws

2.3: 1, 2, 10, 11-31 odd, 38-39, 41, 42, 44

W 4/15 One-sided limits and continuity

2.2: 1, 2, 4, 6, 8-11, 16, 18, 29, 30, 32-35, 38, 46

3.3: 39, 41, 43-46

2.5: 3, 5-9, 14, 15, 17, 18, 21, 23, 24, 27, 31, 35-37, 39-42, 45, 46, 49-53, 65

M 4/20 Infinite limits and asymptotes

2.6: 2-6, 15-25 odd, 31, 35, 37, 43-46, 49, 50, 59, 61

4.5: 61-64

W 4/22 Derivatives

2.7: 3, 5-8, 11, 13, 14, 16, 23, 24, 39, 40, 45, 47, 50

2.8: 3-9, 13, 23, 25, 27, 33, 34, 37-40, 43-47, 53

Exam 2 Material:

W 4/29 Polynomial, exponential, product and quotient rules

3.1: 3-29 odd, 33-36, 39, 40, 43, 44, 47, 48, 51-54, 66

3.2: 1, 2, 3-21 odd, 27-33 odd, 34, 37, 41, 43-46, 59

M 5/4 Trig and chain rules

3.3: 1-15 odd, 17-19, 21-24, 28-31, 33-35, 49

3.4: 1-7 odd, 10-12, 16, 17, 21-29 odd, 35, 37, 39, 48, 50, 51, 53, 59, 60, 63, 79

W 5/6 Implicit differentiation and orthogonal trajectories

3.5: 5-19 odd, 28-31, 35-38, 40, 43, 49-51, 53, 54, 56, 58, 60, 65, 67, 68, 70

M 5/11 Logarithmic differentiation and applications

3.6: 3-15 odd, 23, 24, 27, 28, 31-34, 37, 45-49

3.7: 5, 6, 25, 31, 32

3.8: 2, 4, 12-14, 16, 19, 20

W 5/13 Related rates

3.9: 2-4, 15, 18, 20, 23, 24, 26-28, 31, 35, 39, 44

Suggested homework continued...

Exam 3 Material:

W 5/20 Linear approximation, Newton's method and l'Hôpital's rule

3.10: 11-17 odd, 23, 25-27, 33, 34, 36, 43, 44

4.8: 6-8, 13, 15, 16 (*For # 13-16, just do 4 approximations.*)

4.4: 7-65 odd

W 5/27 Extrema and MVT

4.1: 2, 3, 5-13 odd, 33-43 odd, 49-59 odd, 71, 74, 75, 78

4.2: 9, 11, 13-20, 25, 34, 35

M 6/1 Curve sketching I

4.3: 5-8, 20, 21, 31, 37-42, 45-53 odd, 63, 82, 83

W 6/3 Curve sketching II

4.5: 7-13 odd, 21, 23, 25, 33, 35, 49, 51, 53, 65, 67, 69

M 6/8 Optimization

4.7: 3, 5, 7, 8, 15, 16, 18, 32, 33, 38, 40, 49, 54

The rest of the quarter:

M 6/15 Antiderivatives and parametric equations

4.9: 1-23 odd, 33-47 odd, 51-55, 59, 61, 63, 74, 75, 77

10.1: 1, 3, 11-15 part (b) only, 24, 25, 27

W 6/17 Derivatives of parametric equations

10.2: 1-6, 11-19 odd, 29, 30