Mathematics 1210 Calculus I Fall 2002

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Office Hours. Monday 12:30 pm – 1:30 pm, Wednesday 11:45 am – 12:30 pm, by appointment, or drop by anytime.

Text: *Calculus*, 8th Ed., D. Varberg, E. J. Purcell and S. E. Rigdon

Course Description. Mathematics 1210 is an introduction to differential and integral calculus. Limits, derivatives, and integrals will be developed as tools to analyze the properties of functions. Applications include motion and rates of change, optimization and approximation methods, differential equations, and the calculation of areas, volumes, and lengths.

August	21-23	Handout	Polynomial Calculus	
	26-30			
September	3-6	2.1-2.3	Functions	
	9-13	2.4-2.9	Limits and Continuity	
	16-20	3.1-3.3	Derivatives	EXAM I (Sept. 20)
	23-27	3.4-3.7	Rules for Differentiation	
	30-2	3.8-3.10	Applications of Derivatives	
October	7-11	4.1-4.4	Maxima and Minima	
	14-18	4.6-4.7	Graphing	EXAM II (Oct. 18)
	21-25	9.1	Indeterminate Forms	
	28-1	5.1-5.3	Antiderivatives and Diff. Eqs.	
November	4-8	5.4-5.5	Riemann Sums	
	11-15	5.6-5.7	Fund. Theorem of Calculus	EXAM III (Nov. 15)
	18-22	5.8	Definite Integrals	
	25-27	6.1-6.3	Areas and Volumes	
December	2-6	6.4-6.6	Lengths, Work, and Moments	
	10			FINAL EXAM

Grading Policy. Grades are based on the following: your two best scores on three in-class exams ($\approx 50\%$), the final exam ($\approx 25\%$), and WeBWorK assignments ($\approx 25\%$). You may bring one sheet of paper, and any calculator or computer to any exam. Grades are kept by Eleen Collins, JWB 231, 581-6896, collins@math.utah.edu.

Computers. You are strongly encouraged to use computers to help learn and enhance the material, as well as to solve and check the problems of the course. Maple, Mathematica, and Matlab have many capabilities, such as performing the basic operations of algebra and calculus, and are particularly well suited to visualization and graphics.

Weekly Homework. The assignments below will not be turned in, but you are responsible for knowing how to do the problems. Similar ones will appear on the exams. There will be weekly WeBWorK assignments for which you will receive instructions separately.

Week	Section	Problems
1.	Handout	Problem sets 1 and 2
2.	Handout	Problem sets 3, 4 and 5
3.	2.1	#1, 6-8, 10, 11, 13, 15-29 odd, 33, 36, 45
	2.2	#1, 4, 11, 15-25 odd, 26, 29, 31, 35
	2.3	#1, 2, 9, 15-23 odd, 24, 25, 32, 42, 53-55
4.	2.4	#1-19 odd, 29-32, 36, 37, 40, 49, 50
	2.5	#7, 12 (optional)
	2.6	#1-15 odd, 21, 39, 43
	2.7	#1-13 odd
	2.8	#1-43 odd, 49, 50
	2.9	#1-19 odd, 20, 35-38, 43-45, 57
5.	3.1	#1, 3, 7, 9, 13-23 odd, 27-30
	3.2	#1-19 odd, 27, 33-41 odd, 47
	3.3	#1-41 odd, 49, 51, 53, 55, 56, 58, 59
6.	3.4	#1-19 odd, 24
	3.5	#1-21 odd, 33, 35, 39, 42, 43, 46, 47
	3.6	#1-11 odd, 15, 19, 29, 31, 36
	3.7	#1-11 odd, 17, 19, 23, 27, 29, 33, 35, 39
7.	3.8	#1, 3, 5, 9, 11, 13, 17, 23, 29, 35, 46, 47, 49
	3.9	#1, 2, 5, 7, 9, 12, 15, 17, 27
	3.10	#1, 3, 5, 10, 11, 17, 18, 20, 21, 26, 34, 35
8.	4.1	#1-17 odd, 20, 21, 27, 28
	4.2	#1-35 odd, 36
	4.3	#1-19 odd, 20, 22, 29
	4.4	#1, 5, 12, 19, 20, 23, 26, 29
9.	4.6	#1, 5, 7, 9, 11, 17, 23, 28, 33-35, 40, 41, 53
	4.7	#1, 2, 5, 8, 11, 15, 21, 23, 29-32, 46
10.	9.1	#1, 3, 5, 7, 14, 15, 17, 19, 21, 25
11.	5.1	#1-37 odd
	5.2	#1, 3, 5, 7, 11, 17, 21, 25, 28, 36
	5.3	#1-29 odd, 36, 37, 41
12.	5.4	#1, 3, 5, 7, 11, 12, 13, 15, 17, 20, 24
	5.5	#1, 3, 7, 9, 11-13, 17, 19, 21, 22, 24
13.	5.6	#1-27 odd, 30, 33, 35, 37, 39, 40
	5.7	#1-37 odd, 47-52
14.	5.8	#1-53 odd, 59, 61, 65, 66
15.	6.1	#1-21 odd, 29-35 odd
	6.2	#1-25 odd
	6.3	#1-15 odd, 19, 20
16.	6.4	#1-17 odd
	6.5	#1-9 odd, 15, 21, 22
	6.6	#1-13 odd, 25-27