

Mathematics 1220-2

Calculus II

Spring 2003

Instructor. Professor Aaron Bertram, JWB 302, 581-6964.

Assistant. Robert Hanson, JWB 219, 581-7311

Office Hours. Bertram MTW 11:35-12:15 AM, Hanson Thurs 10:45-11:35 AM in JWB 335. Otherwise by appointment.

Course email address. m1220-2@math.utah.edu

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

Course Description. Mathematics 1220 is a continuation of the study of differential and integral calculus begun in 1210, focusing on applications. Topics include transcendental functions, techniques of integration, improper integrals, infinite sequences and series, Taylor series, numerical methods and approximations, and differential equations.

January	6-10	7.1-7.2	Logarithms and inverse functions	
	13-17	7.3-7.5	Exponential functions and growth	
	21-24	7.6-7.8	1 st order DE's and special functions	
	27-31	8.1-8.3	Techniques of integration	EXAM I (February 4)
February	5-7	8.4-8.5	More techniques of integration	
	10-14	9.1-9.4	L'Hôpital's rule, improper integrals	
	18-21	10.1-10.3	Infinite sequences and series	
	24-28	10.4-10.5	Convergence tests	EXAM II (March 4)
March	5-7	10.6-10.8	Power series	
	10-14	11.1-11.2	Taylor series and integration	
	17-21			SPRING BREAK
	24-28	11.3-11.5	Solving equations numerically	
April	31-4	12.1-12.5	Conics	
	7-11	12.6-12.8	Polar coordinates	EXAM III (April 15)
	16-18	18.1-18.2	Differential equations	
	21-22	18.3	Applications	
	23		Review	
May	1		10:30 AM – 12:30 PM	FINAL EXAM

Grading Policy. Grades are based on: your two best scores on three midterms ($\approx 50\%$), the final exam ($\approx 30\%$), and WeBWorK assignments ($\approx 20\%$).

Weekly Homework. The problems listed on the opposite page will not be turned in, but you need to know how to do them since problems similar to these will appear on the exams and on the WeBWorK assignments (which ARE required). WeBWorK assignments will be due on Thursdays at 10 PM (MST). You will get more information on WeBWorK later.

Email. All email inquiries should be sent to the course email address listed above. Emails will be answered twice each day (once in the morning and once in the early evening).

Webpage. Notes to supplement the material in the book and reviews for the midterms will be posted on the course webpage at <http://www.math.utah.edu/~bertram/1220>

Week	Section	Problems
1.	7.1	#1-33 odd, 36, 38, 39, 46, 49
	7.2	#1-25 odd, 30,
2.	7.3	#1-41 odd, 38, 42, 44, 48, 52, 53
	7.4	#1-33 odd, 37, 38, 41, 45
	7.5	#1-27 odd, 24, 26-28, 31
3.	7.6	#1-13 odd, 19, 24, 25
	7.7	#1-47 odd, 77
	7.8	#1-53 odd
4.	8.1	#1-67 odd
	8.2	#1-31 odd
	8.3	#1-31 odd
5.	8.4	#1-51 odd, 55, 81
	8.5	#1-33 odd, 41-43
6.	9.1	#1-21 odd, 10, 18, 23-26
	9.2	#1, 3, 7, 15, 17, 21, 23, 27, 29, 30, 37, 39, 41-43
	9.3	#1-23 odd, 27, 33-36
	9.4	#1-29 odd, 38, 39, 43, 46, 47, 51-53
7.	10.1	#1-35 odd, 34, 43, 44, 47, 52, 54-57
	10.2	#1-13 odd, 8, 21, 25, 27, 30, 31, 38
	10.3	#1-29 odd, 33
8.	10.4	#1-33 odd, 41-46
	10.5	#1-31 odd, 42, 43
9.	10.6	#1-17 odd, 27, 28
	10.7	#1-29 odd, 32, 33-35
	10.8	#1-33 odd, 34
10.	11.1	#1-17 odd, 20-22, 25, 27, 33, 35
	11.2	#1-13 odd, 31
11.	11.3	#1-9 odd, 15
	11.4	#1-13 odd
	11.5	#1-17 odd
12.	12.1	#1-29 odd
	12.2	#1-29 odd
	12.3	#1-23 odd
	12.4	# 1-24 odd
	12.5	# 1-11 odd
13.	12.6	#1-33 odd, 37, 38
	12.7	#1-33 odd
	12.8	#1-5 odd
14.	18.1	#1-21 odd, 20, 24-26
	18.2	#1-17 odd, 24
15.	18.3	#1-13 odd, 14-18