Math 9 (Redden) — Fall 2020

Revised as of 11/20/20 — "eoo" means every other odd

Week	Date	Lecture	Section	Topics	Suggested Problems (not turned in)
1	9/8/20	1	11.1,11.2	Vectors, Arithmetic, Magnitude	11.1: 5, 9, 21, 23, 27, 35, 37, 39 11.2: 25, 33, 37
	9/10/20	2	12.2	Vector-valued fcns: Calculus computations	12.2: 1-18 odd, 39-58 odd, 62, 65
2	9/15/20	3	12.1 12.3 12.5	Vector-valued functions Theory/Applications of calculus of vvf Arclength	12.1: 11, 13, 15, 19-22 12.3: 3, 7, 9, 17, 27 12.5: 3, 5, 8, 13
	9/17/20	4	11.3 11.4	Dot product, Orthogonality, Projections Cross Product	11.3: 5, 7, 11, 17, 21, 37, 41, 45, 59 11.4: 3-6, 7, 11
3	9/22/20	5	11.5 12.4 10.4	Equations of lines and planes Tangent vectors/lines Polar Coordinates	11.5: 9, 15, 17, 19, 39, 41, 45, 49 12.4: 5, 9-14
	9/24/20	6	13.1	Functions of several variables: Intro, level curves/surfaces, graphing	13.1: 11, 17, 19, 21, 23, 27, 47-50, 51, 54
4	9/29/20	7	13.3 13.5	Partial Derivatives Chain Rule	13.3: 11-40 eoo, 55, 57-68 eoo, 77, 83, 115 13.5: 7, 9, 15
	10/1/20	8	13.6	Directional Derivatives, Gradient	13.6: 3, 9
5	10/6/20	9	13.6	Directional Derivatives, Gradient	13.6: 50, 59
	10/8/20	10		Review	Study for Test 1
6	**10/13/20**			**Test 1**	
	10/15/20	11	13.4 13.7	Differentials Tangent Planes	13.4: 3, 11, 13, 23, 24 13.6: 39, 41
7	10/20/20	12	13.8 13.9	Extreme Values Optimization	13.8: 9, 13, 17, 19, 22 13.9: 3, 7, 13
	10/22/20	13	13.10	Lagrange Multipliers	13.10: 5, 13, 21
8	10/27/20	14	14.1	Iterated Integrals	14.1: 3-27 eoo, 37-49 eoo
	10/29/20	15	14.2	Double Integrals, Density, Volume	14.2: 13, 15, 23, 25, 47 14.4: 4
9	11/3/20			No classes - Election Day	
	11/5/20	16	14.6	Triple Integrals	14.6: 3, 5, 13, 17, 25, 31, 63, 65
10	11/10/20	17	14.3	Polar Coordinates	14.3: 5, 7, 17, 21, 41, 63
	11/12/20	18		Review	Study for Test 2
11	**11/17/20**			**Test 2**	
	11/19/20	19	14.3, 14.7 15.2	Polar/Cylindrical Coordinates Line Integrals	14.3: 33, 42 14.7: 23 15.2: 19, 21, 54, 56

	11/24/20	20	15.2	Line Integrals	15.2: 9, 24
12			15.1	Vector Fields	15.1: 15-18 (use WolframAlpha.com), 19, 23, 37, 39
	11/26/20		**No Class**	**Thanksgiving**	
13	12/1/20	21	15.3	FTC of Line Inegrals	15.3: 3, 7 (also use FTC on these two) 25, 41, 42, 47
	12/3/20	22	15.4	Green's Theorem	15.4: 5, 15, 21, 27, 29, 45, 47
14	12/8/20	23	15.4	Green's Theorem	
	12/10/20	24		Last class: Loose Ends, Review	
	12/15/20			Optional Review Session (Study Day)	
	12/17/20			**Final Exam — 8:00a-10:40a**	

HW	Due Date	Problems
1	9/23/20	p. 815: 7, 9, 13abc, 28, 31 p. 867: 6, 9, 31, 35, 37
2	10/7/20	p. 964: 1, 4, 7, 19, 21, 29, 47, 57
3	10/28/20	p. 964: 37, 43, 71, 81, 87, 93
4	11/11/20	14.1: 19, 41 14.2: 15, 23 14.4: 4 14.6: 5, 17, 63
5	12/2/20	p. 1038: 25, 29, 67 p. 1124: 27, 33, 37, 42
6	12/15/20	p. 1124: 5, 19, 47, 48, 53, 59