MATH 111-012- SPRING 2011

Week Dates	Section & Topic		Lecture, Page & Homework Assignments		
►	0	**PRE-TEST ASSIGNED VIA E-MAIL**	0	►	**PRE-TEST ASSIGNED VIA E-MAIL**
Week 1 1/18 – 1/21	└►	Motivating the Course; Usefulness of Calculus; Review topics of greatest issue in Pre-Calculus	1	└►	Re-work PRE-TEST
	2.1	Rates of Change and Tangents to Curves	2	p.63	1, 5, **7**, 9, 21
	└►	**MATLAB 1 ASSIGNED**	*	└►	**DUE ON 2/4/11**
Week 2 1/24 - 1/28	2.2	Limit of a Function and Limit Laws	3	p.73	1, 3, **5**, **6**, 11, 15, 19, 23, 29, 33, 35, 37, 43, 49, 53, 63
	2.4	One-Sided Limits	4	p.90	1, 5, **6**, 7, 13, 15, 17, 21, 25 , 29, 37, 39, **43**
	2.5	Continuity	5	p.101	1, **2**, **6**, 13, 19, 23, 27, 29, **34**, 39, 43, 47, 53, 57, **66**
Week 3 1/31 – 2/4	2.6	Limits Involving Infinity; Asymptotes of Graphs	6	p.114	1, 3, 7, **10**, 11, 17, **18**, 19, 23, 29, 35, 43, 49, 57, 67, 71, 81, 101
	3.1 3.2	Tangents and the Derivative at a Point The Derivative as a Function	7	p.125 p.131	5, 7, 13, 23, 25. 29, 33, 37 3, 5, 11, 18, 23
	3.2 3.3	The Derivative as a Function (cont.) Differentiation Rules	8	p.132 p.143	27, 35, 37, 41, 43, **46**, 53, **55** 1, 7, 11 & **MATLAB 1 DUE 2/4/11**
Week 4 2/7 – 2/11	└►	**REVIEW FOR EXAM #1**	9	└►	**STUDY FOR EXAM #1**
	└►	MIDTERM EXAM I: WEDNESDAY ~ FEBRUARY 9, 2011			
	└►	**GO OVER EXAM I**			
	3.3	Differentiation Rules (cont.)	10	p.143	13, 17, 21, 31, **37**, 39, 41, 47, **50**, 53, 57, 59, **67**, **69**, 72
	3.3 3.4	Differentiation Rules (cont.) The Derivative as a Rate of Change	11	p.152	1, 3, 7, 13, 15, 19, **21**, 23, 25, **26**
Week 5 2/14 – 2/18	3.5	Derivatives of Trigonometric Functions	12	p.159	3, 7, 15, 19, 21, 25, 31 ,35, **39**, 47, 49, 53, **57**, 59, 61
	3.6	The Chain Rule	13	p.167	1, 7, 9, 17, 21

	3.6 3.7	The Chain Rule (cont.) Implicit Differentiation	14	p.167	23, 29, 35, 41, 55, 61, 69, 73, 79, **85**, 89, **97 (w/o jerk)**, **100**
Week 6 2/21 – 2/25	3.7	Implicit Differentiation (cont.)	15	p.174	1, 7, 15, 19, 21, 23, 29, 33, 39, 47, **50**
	3.8	Derivatives of Inverse Functions and Logarithms	16	p.184	7, 11, 13, 21, 24, 29, 37, 41, 47, 51, 55, 65, 89, 95
	3.9	Inverse Trigonometric Functions	17	p.191	1, 3, 5, 7, 9, 11, 13, 23, 25, 33, 41, 49, 63
Week 7 2/28 – 3/4	3.10	Related Rates	18	p.197	1, 5, 13, **16**, **18**, 21, 23, 25
	3.10	Related Rates (cont.)	19	p.199	27, 29, 31, **34**, **35**, 37, 40, 43
	3.11	Linearization and Differentials	20	p.210	3, 11, 13, **15**, **16a**,**b**,19, 23, 31, 41, 43, 51, 53, 57, **64a**,**b**
Week 8 3/7 – 3/11	└▶	**REVIEW FOR EXAM #2**	21	└▶	**STUDY FOR EXAM #2**
	└▶	MIDTERM EXAM II: WEDNESDAY ~ MARCH 9, 2011			
	└▶	**GO OVER EXAM II**			
	4.1	Extreme Values of Functions	22	p.227	1, 3, 11, 13, 21, 25, 35, 41, 59, 63, 69, 75, 85, 86
	4.1 4.2	Extreme Values of Functions The Mean Value Theorem	23	p.227 p.236	1, 3, 11, 13, 21, 25, 35, 41, 59, 63, 69, 75, 85, 86 1, 4, 10, 13, 16, 21, 25
	└▶	**MATLAB 2 ASSIGNED**	*	└▶	**DUE ON 4/1/11**
Week 9 3/14 – 3/18	└▶	SPRING RECESS: MARCH 13-19, 2011			
Week 10 3/21 – 3/25	4.2	The Mean Value Theorem (cont.)	24	p.236	31, 33, 37, 41, 43, 49, 51, 56, **57**, 63, 65, 73
	4.3	Monotonic Functions and the First Derivative Test	25	p.241	1, 7, 13, 15, 21, 33, 43, 49, 53, 59, 67, 73, 78
	4.4	Concavity and Curve Sketching	26	p.251	1, 5, **9**, 19, 23, **29**, 37, 41, **43**, 51
Week 11	└▶	**LAST DAY TO WITHDRAW FROM THIS COURSE**			

3/28 – 4/1	4.4 4.5	Concavity and Curve Sketching (cont.) Indeterminate Forms & L'Hopital's Rule	27	p.252 p.261	59, 71, 73, 81, 85, 91, 103, 111, 113, 117, 121 1, 5, 11, 13, 17, 27, 29, 35, 41, 42, 46, 49
	4.5 4.6	Indeterm. Forms & L'Hopital's Rule (cont.) Applied Optimization	28	p.261 p.268	51, 58, 71, 75, 77, 79, 81, 85 1, 3, 5, 7, 11, 12
	4.6	Applied Optimization (cont.)	29	p.269 └▶	14, 24, 29, 37, 38, 39, 42 & **MATLAB 2 DUE 4/11**
	└▶	**MATLAB 3 ASSIGNED**	*	└▶	**DUE ON 4/21/11**
Week 12 4/4 – 4/8	4.6 4.7	Applied Optimization (cont.) Newton's Method	30	p.272	45, 47a-c, 54, 57, 63, 67a
	4.7 4.8	Newton's Method (cont.) Antiderivatives	31	p.277 p.285	1, 3, 5, 7, 9, 10, 11, 19, 25 1, 5, 11, 13, 15, 19, 25, 35, 41, 53, 55, 61, 65, 71, 75, 76
	4.8	Antiderivatives (cont.)	32	p.286	83, 86, 89, 91, 97, 101, 104, 105, 113, 119, 121, 127
Week 13 4/11 – 4/15	└▶	**REVIEW FOR EXAM #3**	33		**STUDY FOR EXAM #3**
	└▶	MIDTERM EXAM III: WEDNESDAY ~ APRIL 13, 2011			
	└▶	**GO OVER EXAM III**			
	5.1	Area and Estimating with Finite Sums	34	p.304	1, 3, 9, 13, 14, 15, 19
	5.1 5.2	Area and Estimating w/ Finite Sums (cont.) Sigma Notation and Limits of Finite Sums	35	p.304 p.312	1, 3, 9, 13, 14, 15, 19 1, 5, 7, 9, 15
Week 14 4/18 – 4/22	5.2 5.3	Sigma Not. & Limits of Finite Sums (cont.) The Definite Integral	36	p.313 p.321	17, 25, 31, 33, 39, 41 1, 7, 9, 13, 15, 22
	5.3	The Definite Integral (cont.)	37	p.322 └▶	29, 35, 41, 47, 51, 59, 64, 71, 75, 79 & **MATLAB 3 DUE 4/21**
	5.4	The Fundamental Theorem of Calculus	38	p.333	1, 8, 13, 17, 23, 31
4/22	└▶	**GOOD FRIDAY** ~ NO CLASSES SCHEDULED			
Week 15 4/25 – 4/29	5.4 5.5	The Fundamental Theorem of Calc. (cont.) Indefinite Integrals & the Substitution Rule	39	p.334	41, 45, 47, 50, 51, 59, 61, 65, 69, 71, 75, 77, 79, 81, 83

	5.5	Indefinite Integrals & the Sub. Rule (cont.)	40	p.342	1, 7, 11, 17, 19, 21, 23, 25, 27, 33, 43, 47, **51**, 55, 61, 71, **79**
	5.6	Substitution and Area Between Curves	41	p.350	1, 9, 17, 27, 39, 47, 51, 55, 63, 67, 73, 75, 81, 87, 93, 105, 107, 113
Week 16 5/2- 5-4	└▶	**REVIEW FOR FINAL EXAM**	42	└▶	**STUDY FOR FINAL EXAM**
	└▶	**TUE MAY 3 CLASSES FOLLOW A FRIDAY SCHEDULE**			
	└▶	**5/4 READING DAY**			
Finals	FINAL EXAM WEEK: MAY 5-11, 2011				