MA3160 – 02/05 : Multivariable Calculus with Tech   Spring 2008 Rev 1

Course Schedule and Assignments

Week of	Section	Topic
1: Jan 14th	12.1	Functions of Two Variables
	12.2	Graphs of Functions of Two Variables
	12.3	Contour Diagrams
2: Jan 21st		**NO CLASS – MLK DAY HOLIDAY**
	12.4	Linear Functions
	12.5	Functions of Three Variables
3: Jan 28th	13.3 – 13.4	Review of Dot and Cross Products
		NO CLASS – SNOW DAY
	14.1	The Partial Derivative
4: Feb 4th	14.2	Computing Partial Derivatives
		NO CLASS – EVENING EXAM MAKEUP DAY
		NO CLASS – WINTER CARNIVAL BREAK
5: Feb 11th	14.3	Local Linearity and the Differential
	14.4	Gradients and Directional Derivatives in a Plane
	14.5	Gradients and Directional Derivatives in Space
6: Feb 18th	14.6	The Chain Rule
	14.6	Second Order Partial Derivatives
	15.1	Local Extrema
7: Feb 25th		Review
		EXAM I – Chapters 12, 13, 14 and 15 -- (25 Feb. 6pm)
	16.1	Integrals of Functions of Two Variables
	16.2	Iterated Integrals
8: Mar 3rd	16.3	Triple Integrals
	16.4	Double Integrals in Polar Coordinates
		NO CLASS – EVENING EXAM MAKEUP DAY
		Spring Break : Mar 10th – Mar 14th
9: Mar 17th	16.5	Integrals in Cylindrical and Spherical Coordinates
	16	Chapter 16
	17.1	Parameterized Curves
10: Mar 24th	17.2	Motion, Velocity and Acceleration
	17.3	Vector Fields
	18.1	The Idea of a Line Integral
11: Mar 31st	18.2	Computing Line Integrals over Parameterized Curves
	18.3	Gradient Fields and Path-Independent Fields
	18.4	Path-Dependent Vector Fields and Green's Theorem
12: Apr 7th		Chapter 18
	19.1	The Idea of a Flux Integral
	19.2	Flux Integrals: Graphs, Cylinders and Spheres
13: Apr 14th		Review
		EXAM II – Chapters 16, 17, 18, 19 -- (14 Apr 6pm)
	20.1	The Divergence of a Vector Field
	20.2	The Divergence Theorem
14: Apr 21st	20.3	The Curl of a Vector Field
	20.4	Stokes' Theorem
		Review
		Final Exams : Apr 28th – May 2nd

Homework Problem List

Section	Problems
12.1	1, 2, 3, 6, 8, 9, 11, 17, 19, 23, 27, 31
12.2	1 – 11, 16, 19
12.3	1, 4, 7, 12, 13, 17, 20, 28
12.4	3, 4, 6, 11, 12, 13, 14, 17, 21
12.5	1, 3, 5, 7, 9, 13, 15-18, 21, 23
13.3	2, 3, 8, 11, 13, 15, 17, 21, 23, 25, 29
13.4	3, 5, 7, 11, 12, 13, 15, 21, 23
14.1	1, 5, 7, 9, 17, 19
14.2	1, 3, 5, 9, 11, 15, 19, 23 , 27, 29, 33
14.3	1, 3, 7, 9, 11, 13, 18, 25
14.4	1, 3, 5, 9, 17, 23, 31, 37, 65
14.5	1, 2, 9, 11, 13, 17, 19, 25, 33
14.6	1, 2, 3, 7, 9, 11, 13, 15, 19
14.7	1, 5, 7, 9, 11, 15, 16, 21, 23, 27, 31
15.1	1, 5, 7, 9, 13, 21
15.3	2, 10
16.1	1, 3, 4, 9, 13, 15, 21, 27
16.2	1, 4 ,5, 7, 11, 13, 17, 18, 23, 26, 29, 35, 36, 39, 41
16.3	1, 5-23 odd, 31 – 37 odd
16.4	1, 4, 8, 10, 14, 15, 17, 20, 23
16.5	1, 5, 7, 9, 10, 11, 12, 13, 15, 21, 27, 33, 37
17.1	3, 7, 11, 12, 13-23 odd, 27 ,31, 32, 36, 47, 54
17.2	2, 3, 5, 8, 9, 12, 14, 23, 30, 33
17.3	1 – 8, 13, 19, 25
18.1	1 – 8, 10, 12, 15, 21, 25
18.2	3, 4, 6, 9, 11, 13, 15
18.3	2 – 4, 7 – 13, 21, 29
18.4	1, 3-7, 9-11, 17, 19
19.1	1 – 13 odd, 17, 21, 25
19.2	1, 3, 9, 13, 15
20.1	1 – 9 odd, 13, 21
20.2	2, 3, 5, 14, 23, 29
20.3	1 – 4, 7, 9, 11, 14, 17, 21
20.4	1, 3, 7, 11, 17, 29