

Syllabus Math 203

Department of Mathematics

King Abdul Aziz University

second Semester 2013

Textbook: Calculus, Early Transcendentals - 6 Edition , Authors: James Stewart

Chapter Title	Section Title	Examples	Exercises	HW	
Chapter 10 <i>Parametric Equations and Polar Coordinates</i>	10.1	Curves Defined by Parametric Equations	1-5	5-22	
	10.2	Calculus with Parametric Equations	1-6	2,3,11,12,13,14,15,17,18,25,28,29,30,31,32,41,42,44,45,46,47,59,60,61,65,66	
	10.3	Polar coordinates	1-9	1-26 odd , 29-33, 57-62 odd , 63-65	
	10.4	Area and Length of a Polar Coordinates	1-4	1—8 odd , 9,10, 23-28 odd,	
	10.5	Conic Sections	1-7	1-48 (odd)	
	10.6	Conic Sections in Polar Coordinates	1-5	1-15 (odd)	
Chapter 12 <i>Vectors and The Geometry of Space</i>	12.1	Three Dimensional Coordinate Systems	1-6	3,7,9,11,13,14,15,17,19,20,21,23,24	
	12.2	Vectors	2-6	7-29 odd	
	12.3	The Dot Product	1-4 , 6-8	1-40 odd	
	12.4	The Cross Product	1-5	1-20 odd , 29-38 odd ,45	
	12.5	Equations of Lines and Planes	1-10	46,49	43-38 odd , 43-58 odd , 62,63,65-72
	12.6	Cylinders and Quadric Surfaces	1-8		3-8 , 21-28 , 29-36
Chapter 13 <i>Vector Functions</i>	13.1	Vector Functions and space curves	1-6	1-6 , 25 , 27 , 28	
	13.2	Derivatives and Integrals of Vector Functions	1-5	(3-8)(b) , 9-29 , 33-40	
	13.3	Arc Length And Curvature	1-8	57	1-6 , 13,14,17—25,27-29,43-46
	13.4	Motion in Space: Velocity and Acceleration	1-7		3-18 odd , 33-38
Chapter 14 <i>Partial Derivatives</i>	14.1	Functions of Several Variables	1,4-6 ,9-12,14	6-10 ,11-20 odd , 39-46 , 61-64 odd	
	14.2	Limits and Continuity	1-8	5-18 , 29-38	
	14.3	Partial Derivatives	1-9	15-74,77	
	14.4	Tangent Planes and linear Approximations	1-2,4-6	1-6 , 11-20 odd , 25-30	
	14.5	The Chain Rule	1-9	1-16 Odd , 21-33 odd , 45-54 odd	
	14.6	Directional Derivatives and Gradient Vectors	2-8	7,9,11,13,15,17,21,23,25,39-44	
	14.7	Maximum and Minimum values	3,5,7	1,5,6,7,11,12	
	14.8	Lagrange Multipliers	1-4	4,5,7,8	