

King Fahd University of Petroleum and Minerals
 Department of Mathematical Sciences
 SYLLABUS
 Semester III (Summer), 2005-2006(053)
 Prepared by: Dr. Muhammad Anwar Chaudhry
 Math 132: Applied Calculus (3-0-3)

Course #: Math 132
Title: Applied Calculus
Textbook: *Introductory Mathematical Analysis for Business, Economics, and the life and Social Sciences*, by Ernest F. Haeussler, Jr., Richard S. Paul and Richard Wood, 11th edition. (2005).
Prerequisite: Prep-Year Mathematics or Equivalent.
Objectives: This course is intended to introduce students to the basic concepts of calculus and their applications, especially problems related to differentiation and integration.

Week	Date	Section	Material	Homework	
1	June 24-28	10.1	Limits	17,18,33,40,43	
		10.2	Limits (cont'd)	2,15,36,42,52,57	
		10.4	Continuity	5,11,24,32,37	
		11.1	The Derivative	13, 14,17,26,27	
		11.2	Rules for Differentiation	22,34,61,73,78,85	
2	July 1-5	11.3	The Derivative as a Rate of Change	8,12,16,20,27,39,41	
		11.4	Differentiability and Continuity		
		11.5	Product and Quotient Rules	10,16,37,50,61,66	
		11.6	The Chain Rule and the Power Rule	8,18,44,46,62,69,72	
3	July 8-12	12.1	Derivatives of Logarithmic Functions	18,20,26,32,50	
		12.2	Derivatives of Exponential Functions	16,26,30,38,39	
		12.4	Implicit Differentiation	10,18,24,26,34	
		Monday, July 10, 2006: Suggested Date for Major Exam I			
		12.5	Logarithmic Differentiation	8,12,19,21,26	
		12.7	Higher Order Derivatives	2,14,30,34,37	
4	July 15-19	13.1	Relative Extrema	18,30,46,48,60	
		13.2	Absolute Extrema on a Closed Interval	2,10,12	
		13.3	Concavity	14,30,40,46,68	
		13.4	The Second-Derivative Test	6,8,12	
		13.5	Asymptotes	14,22,38,46	
5	July 22-26	13.6	Applied Maxima and Minima	2,14,18,22,26	
		14.1	Differentials	12,18,22,28	
		14.2	The Indefinite Integral	10,20,30,42,50	
		14.3	Integration with Initial Conditions	6,8,10,12,14	
		14.4	More Integration Formulas	9,15,35,53,70,75	
6	July 29-August 2	14.5	Techniques of Integration	6,18,30,44,48,55	
		14.8	The Fundamental Theorem of Int. Calculus	16,32,36,44,48	
		Saturday, July 29, 2006: Suggested Date for Major Exam II			
		14.10	Area	9,15,20,24,34	
		14.11	Area between Curves	1,5,12,30,30,32	
		15.1	Integration by parts	8,12,18,20,24,28,32	
7	August 5-9	15.3	Integration by Tables	8,12,30,36,49,54	
		**	Derivatives and Integrals of Trig. Functions	Handout	
		17.1	Functions of Several Variables	2,5,12,16,23,28	
		17.2	Partial Derivatives	6,18,20,28,34	
8	August 12-14	17.5	Higher Order Partial Derivatives	6,9,12,20,21	
		17.7	Maxima and Minima for funs. of Two Vars.	4,8,15,19,22,26,29	

- KFUPM policy regarding attendance will be strictly enforced.