## King Fahd University of Petroleum and Minerals

Department of Mathematical Sciences

Syllabus of  $Math\;132\;(052)$ 

(Mohammad Z. Abu-Sbeih)

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, 11<sup>h</sup> ed. (2005).

Neek	Date	Section	Material	Homework		
		10.1	Limits	17,18,33,40,43		
1	Feb 12 - <b>16</b> *	10.2	Limits (cont'd)	2,15,36,42,52,57		
		10.4	Continuity	5,11,24,32,37		
	Feb 18-22	11.1	The Derivative	13, 14, 17, 26, 27		
2		11.2	Rules for Differentiation	22,34,61,73,78,85		
		11.3	The Derivative as a Rate of Change	8,12,16,20,27,39,41		
3	Feb 25-Mar 01	11.4	Differentiability and Continuity			
		11.5	Product and Quotient Rules	10,16,37,50,61,66		
	Mar 04-08	11.6	The Chain Rule and the Power Rule	8,18,44,46,62,69,72		
4		12.1	Derivatives of Logarithmic Functions	18,20,26,32,50		
		12.2	Derivatives of Exponential Functions	16,26,30,38,39		
	Mar 11-15	12.4	Implicit Differentiation	10,18,24,26,34		
5		12.5	Logarithmic Differentiation	8,12,19,21,26		
		12.7	Higher Order Derivatives	2,14,30,34,37		
			Major Exam I, Saturday, March 18, 2006	)		
		13.1	Relative Extrema	18,30,46,48,60		
6	Mar 18-22	13.2	Absolute Extrema on a Closed Interval	2,10,12		
	Mar 25-29	13.3	Concavity	14,30,40,46,68		
7		13.4	The Second-Derivative Test	6,8,12		
		13.5	Asymptotes	14,22,38,46		
		Midterm	Break: April 1-2			
8	Apr 03-05	13.6	Applied Maxima and Minima	2,14,18,22,26		
		14.1	Differentials	12,18,22,28		
	Apr 08-12	14.2	The Indefinite Integral	10,20,30,42,50		
9		14.3	Integration with Initial Conditions	6,8,10,12,14		
		14.4	More Integration Formulas	9,15,35,53,70,75		
	Apr 15-19	14.5	Techniques of Integration	6,18,30,44,4855		
10		14.8	The Fundamental Theorem of Int. Calculus	16,32,36,44,48		
		14.10	Area	9,15,20,24,34		
Major Exam II, Monday, April 24, 2006						
11	Apr 22-26 Apr 29-May 03	14.11	Area between Curves	1,5,12,30,30,32		
		15.1	Integration by parts	8,12,18,20,24,28,32		
12		15.3	Integration by Tables	8,12,30,36,49,54		
		**	Derivatives and Integrals of Trig. Functions	Handout		
13	May 06-10	17.1	Functions of Several Variables	2,5,12,16,23,28		
14	May 13-17	17.2	Partial Derivatives	6,18,20,28,34		

		17.5	Higher Order Partial Derivatives	6,9,12,20,21
15	May 20-24	17.7	Maxima and Minima for funs. of Two Vars.	4,8,15,19,22,26,29
	May 27		Review	

## (\*) Thursday Feb. 16: Normal Saturday classes.

- KFUPM attendance policy will be strictly enforced
- Suggested time for major exams:
  - First Major: Saturday, March 18, 2006
  - o Second Major: Monday, April 24, 2006
- Final Exam is comprehensive and will be announced by the registrar.
- Important Dates:
  - March 29: Last day for dropping courses with grade of "W"
  - April 19: Last day for withdrawal from <u>all courses</u> with grade of "W"
  - May 17: Last day for withdrawal from all courses with grade of "WP/WF"