King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
Dr. Mohammad Z. Abu-Sbeih
Summer 2007 (063)

Math 132: Applied Calculus (3 – 0 – 3)

Course Title:	Applied Calculus
Course Number:	Math 132
Textbooks:	Introductory Mathematical Analysis for Business, Economics, and the Life and Social Services by Ernest F. Haeussler, Jr. & Richard S. Paul, 11th ed. (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.
Instructor:	Dr. Mohammad Z. Abu-Sbeih.
Office Location:	Building 5 - Room 309.
Phone Number:	2697.
e-mail:	abusbeih@kfupm.edu.sa
Web Home page:	http://www.kfupm.edu.sa/math/People/abusbeih.htm
Office Hours:	9:30 -- 10:20 a.m. [Saturday, Sunday, Monday, Tuesday] Or by appointment.

Grades:			
	(1)	3 Major Exams (20 points each)	60%
	(2)	Comprehensive Final (***MULTIPLE CHOICE***)	40%
	(3)	Total:	100%

Attendance: The university regulations on attendance say: students are expected to attend all classes. However, valid excuses are accepted for eligible reasons.

1. The only acceptable excuse for absence is the one authorized by the Deanship of Student Affairs on their prescribed form.
2. The excuse should be presented to the instructor no later than one week following the resumption of class attendance.
3. **If the unexcused absences reach 6 classes, the student will get a "DN" grade.**
4. Coming late to the class is not acceptable. However it will be counted as ½ absence.

Academic Honesty: The principles of truth and honesty are fundamental in the academic work. Any type of academic dishonesty will not be forgiven.

1. If a student cheats in a major Exam or a final, he may get an "F" in the course and he will be reported to the Dean of the College for further disciplinary action.
2. Any attempt of cheating is considered as an act of academic dishonesty.

Homework: The students are expected to do the assigned homework problems by themselves because it is an integral part of the teaching process. It teaches the students on how to write and communicate thoughts and ideas. That is why the homework should be written in a clear and detailed manner as if you are writing to explain the problem to a friend not to the instructor.

IMPORTANT NOTE: It is the student's responsibility to keep informed of any announcements, syllabus adjustments or policy changes made during scheduled classes.

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Syllabus of **Math 132** (**063**)

(Mohammad Z. Abu-Sbeih)

Textbook: *Introductory Mathematical Analysis for Business, Economics, and the life and Social Sciences*, by Ernest F. Haeussler, Jr. & Richard S. Paul, 11h ed. (2005).

Week	Section	Material	Homework
1	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
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
	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
Sunday		**First Exam: July 15 On Chapters 10 and 11**	
3	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
	12.5	Logarithmic Differentiation	8,12,19,21,26
4	12.7	Higher Order Derivatives	2,14,30,34,37
	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
Saturday		**Second Exam: July 28 On Chapters 12 and**	**13.1-13.5**
5	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
6	14.4	More Integration Formulas	9,15,35,53,70,75
	14.5	Techniques of Integration	6,18,30,44,4855
	14.8	The Fundamental Theorem of Int. Calculus	16,32,36,44,48
	14.10	Area	9,15,20,24,34
	14.11	Area between Curves	1,5,12,30,30,32
Saturday		**Third Exam: August 11 On 13.6 - 14.11**	
7	15.1	Integration by parts	8,12,18,20,24,28,32
	15.3	Integration by Tables	8,12,30,36,49,54
	**	Derivatives and Integrals of Trig. Function	**Handout**
8	17.1	Functions of Several Variables	2,5,12,16,23,28
	17.2	Partial Derivatives	6,18,20,28,34
	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
Final Exam		**Thursday: 23 August At 12:30 pm**	

Final Exam is **comprehensive** and (***MULTIPLE CHOICE***)