King Fahd University of Petroleum and Minerals
Department of Mathematical Sciences
Dr. Mohammad Z. Abu-Sbeih
Semester II, 2005/2006 (052)
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, 10th ed. (2002).
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:	11:00 -- 11:50 a.m. [Saturday, Monday, Wednesday] 12:30 -- 01:15 p.m. [Saturday, Monday] Or by appointment.

Grades:	(1)	2 Major Exams (20 points each)	40%
	(2)	4 Quizzes & Homework	20%
	(3)	Comprehensive Final (***MULTIPLE CHOICE***)	40%
		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 7 classes, the student will get a "WF" 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 copy the homework from a friend, he will get ZERO on all homework's of the course.
2. A cheating in a quiz will result in a ZERO grade on all quizzes.
3. 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.
4. 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. **LATE HOMEWORK WILL NOT BE ACCEPTED.**

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

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, 11h ed. (2005).

Week	Date	Section	Material	Homework
1	Feb 12 - **16***	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
2	Feb 18-22	11.1	The Derivative	13, 14,17,26,27
		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
4	Mar 04-08	11.6	The Chain Rule and the Power Rule	8,18,44,46,62,69,72
		12.1	Derivatives of Logarithmic Functions	18,20,26,32,50
		12.2	Derivatives of Exponential Functions	16,26,30,38,39
5	Mar 11-15	12.4	Implicit Differentiation	10,18,24,26,34
		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				
6	Mar 18-22	13.1	Relative Extrema	18,30,46,48,60
		13.2	Absolute Extrema on a Closed Interval	2,10,12
7	Mar 25-29	13.3	Concavity	14,30,40,46,68
		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
9	Apr 08-12	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
10	Apr 15-19	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
Major Exam II, Monday, April 24, 2006				
11	Apr 22-26	14.11	Area between Curves	1,5,12,30,30,32
		15.1	Integration by parts	8,12,18,20,24,28,32
12	Apr 29-May 03	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**
  - **Second Major: Monday, April 24, 2006**
- **Final Exam** is **comprehensive** and (***MULTIPLE CHOICE***)
- ***Important Dates:***
  - **March 29:** Last day for dropping courses with grade of "**W**"
  - **April 19:** Last day for withdrawal from **all courses** with grade of "**W**"
  - **May 17:** Last day for withdrawal from **all courses** with grade of "WP/WF"