

King Fahd University of Petroleum and Minerals
Department of Mathematical Sciences
Dr. Mohammad Z. Abu-Sbeih
Semester I, 2005/2006 (051)
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.
Office Hours: Saturday, Monday, Wednesday:
From 9:00 p.m. - to -10:00 p.m. or by appointment.

Grades:	(1) 2 Major Exams (20 points each)	40%
	(2) 4 Quizzes & Homework	20%
	(3) <u>Comprehensive Final (MULTIPLE CHOICE)</u>	<u>40%</u>
	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.

Week	Date	Section	Material	Homework
1	Sep. 10-14	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	Sep. 17-21	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
September 24 (National Holiday)				
3	Sep. 25-28	11.4	Differentiability and Continuity	
		11.5	Product and Quotient Rules	10,16,37,50,61,66
4	Oct. 1-5	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	Oct. 8-12	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, October 15, 2005				
6	Oct. 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
7	Oct. 22-26	13.4	The Second-Derivative Test	6,8,12
		13.5	Asymptotes	14,22,38,46
		13.6	Applied Maxima and Minima	2,14,18,22,26
Id Al-Fitr Vacation (Oct.27- Nov.11)				
8	Nov. 12-16	14.1	Differentials	12,18,22,28
		14.2	The Indefinite Integral	10,20,30,42,50
9	Nov. 19-23	14.3	Integration with Initial Conditions	6,8,10,12,14
		14.4	More Integration Formulas	9,15,35,53,70,75
		14.5	Techniques of Integration	6,18,30,44,48,55
10	Nov. 26-30	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
Major Exam II, Saturday, December 3, 2005				
11	Dec. 3-7	15.1	Integration by parts	8,12,18,20,24,28,32
		15.3	Integration by Tables	8,12,30,36,49,54
12	Dec. 10-14	**	Derivatives and Integrals of Trig. Functions	Handout
13	Dec. 17-21	17.1	Functions of Several Variables	2,5,12,16,23,28
14	Dec. 24-28	17.2	Partial Derivatives	6,18,20,28,34
		17.5	Higher Order Partial Derivatives	6,9,12,20,21
15	Dec.31-Jan 4	17.7	Maxima and Minima for funs. of Two Vars.	4,8,15,19,22,26,29
Id Al-Adha Vacation (Jan. 5- Jan.20)				
	Jan-21		Review	

- KFUPM attendance policy will be strictly enforced
- Suggested time for major exams:
 - **First Major: Saturday, October 15, 2005**
 - **Second Major: Saturday December 3, 2005**
- Final Exam is comprehensive and will be announced by the registrar.
- ***Important Dates:***
 - **October 25:** Last day for dropping courses with grade of "W"
 - **November 30:** Last day for withdrawal from **all courses** with grade of "W"
 - **December 28:** Last day for withdrawal from **all courses** with grade of "WP/WF"