

University of New Mexico- Valencia Campus
Department of Science & Mathematics
Math 180- Sec. 501- CRN # 22955)
Elements of Calculus I
Fall 2010

Instructor: Khaled Kassem (Mr. K)

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Class Schedule: Tuesday 03:00-05:45PM @ A-129

Office Room: A-107

Office Hours: Monday & Wednesday: 04:15-05:45PM.

Tuesday & Thursday 11:45AM-01:00PM, and 02:15-03:00PM

Calculator: TI 83 Plus recommended, not required

Text: Calculus & Its Applications, Twelfth Edition, by Goldstein, Lay, et al.

My Math Lab Course ID: kassem22273

Please note the following guidelines for the course:

-Prerequisite: Grade of C (not C-) or better in Math 121 or Math 150

- Grades: Your grade will be based on your performance on the following assignments and exams. Your instructor may also give short in-class quizzes and special homework assignments that will contribute to your grade. To receive credit for this course you must have at least 70% on the final exam **and** 70% overall.

Quizzes and Assignments 100 points

3 in-class tests 300 points

Final Exam 200 points

Total 600 points

Your overall average will be found by dividing your total points by 6 and applying the following measure:

A 90% -100%

B 80% - 89%

C 72% - 79%

D 60%- 70%

F Below 60%

- Homework: The syllabus lists the **recommended** homework problems. These are **NOT** to be handed in.

Keep all of your homework together in a folder so that if you are having trouble in the course, you can bring it with you when you go to see your instructor or get tutoring. The problems used on exams and quizzes are based on these homework problems. Work as many as it takes for you to understand the material. You should expect to spend an average of 10-15 hours per week on homework problems.

- Attendance is mandatory, and if you have four or more unexcused absences, you may be dropped from the course. **NOTE:** it is YOUR responsibility to drop the course if you decide to stop attending. If you don't, you may receive an F. The syllabus contains bold-print notices that give the deadlines for dropping the course or making other changes.

- Missed Exams: If you miss an exam, contact your instructor immediately and provide a note (hardcopy or email) explaining your reason. Provide enough detail so that the instructor can check your excuse. Make-up tests will only be given if your excuse is valid. "I wasn't ready for it" is not a valid excuse. Be aware that make-up exams are more difficult than the original exam. **No exam scores will be dropped. Graphing Calculators are NOT allowed on any in-class exam including the final exam. You can use a scientific calculator. A note card can be used only on the final exam.**

- Student Behavior: Students are expected to behave in a courteous and respectful manner towards the instructor and their fellow students. Please be on time for your class, turn off your cell-phone and refrain from talking or doing any other activity that could be disruptive to the class. If you need to leave the class early, inform your instructor before the class starts.

Academic Dishonesty: Academic dishonesty is defined in the 2010-2012 UNM-Valencia catalog, and includes but not limited to copying work from other students. Any student found doing this is subject to disciplinary action, ranging from a reduced or failing grade for the work in question and/or the course, to dismissal from the University.

- **Disability Statement:** We will accommodate students with documented disabilities. During the first two weeks of the semester, those students should inform the instructor of their particular needs and they should also contact **Equal Access Services** at 925-8560.

- **Academic support and tutoring:** The Valencia Campus Library provides a quiet atmosphere for study and is an excellent resource for supplementary materials. It also has a link to all your courses syllabi located at <http://www.unm.edu/~unmvclib/syllabifall2010.htm>. The Learning Center (925-8900) offers tutorial and individualized instruction at no cost to the student. Also, for those who drive from Albuquerque, you can get tutoring for this class at UNM- Main Campus at the CAPS- Center for Academic Program Support; 3rd floor of Zimmerman Library (277-4560).

Math 180 Tentative schedule- Fall 2010

<u>Week</u>	<u>Topic</u>	<u>Homework</u> (only odd problems, unless otherwise stated)
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1 (08/24)	Chapter 0	Supplementary exercises, Page 51, 1-44 (all)
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2 (08/31)	1.1	1-63
	1.2	1-37

Last day to add courses or change sections: Friday, September 03rd.

Labor Day Holiday (No Class): Monday, September 06th

3 (09/07)	1.3	1-77
	1.4	1-47, 61-71
	1.5	1-25, 29-33

Last day to drop without a grade & Last day to drop with refund: Friday, September 10th.

4 (09/14)	1.6	1-61
	1.7	1-41
	1.8	1-31

Last day to change grading options: Friday, September 17th.

5 (09/21)	Test 1	
	2.1	1-39

6 (09/28)	2.2	1-43
	2.3	1-31, 35-43
	2.4	1-35

7 (10/05)	2.5	1-25
	2.7	1-17
	3.1	1-43

8 (10/12)	3.2	1-49
	3.3	1-45

9 (10/19)	Test 2	
	4.1	1-41

10 (10/26)	4.2	1-43
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	4.3	1-43
11 (11/02)	4.4	1-41
	4.5	1-35
12 (11/09)	4.6	1-53
	5.1	1-23
<i>Last day to withdraw <u>without</u> the Dean's approval: Friday, November 12th . (WP/WF required)</i>		
13 (11/16)	5.2	1-17, 27, 28
	5.4	1-11
14 (11/23)	Test 3	
	6.1	1-47
15 (11/30)	6.2	1-10 (all)
	6.3	1-49
16 (12/07)	Review	
<i>Last day to withdraw <u>with</u> the Dean's approval: Friday, December 10th .</i>		
17 (12/14)	Final Exam: Tuesday, December 14, 2010 @ 03:00-05:00PM (In-Class-A-129)	

List of Learning Outcomes for Math 180

Course Goal #1: Communication

Student Learning Outcomes (SLOs)

SLO 1: Students will use correct mathematical notation and terminology

SLO 2: Students will be able to generate, read, and interpret graphs of functions

SLO 3: Students will be able to use functions that model real-world situations such as the profit of a business, the design of a box, and the height of a thrown ball.

SLO 4: Students will use the various notations for the derivative.

Course Goal #2: The Derivative

Addresses UNM core area 2/ HED area II: Mathematics (Calculus)

SLO 1: Student will be able to determine the slope of a straight line from a graph and from any of the forms of the equation, and interpret it as a rate of change.

SLO 2: Students will understand the slope of a curve at a point as the slope of the tangent line to the graph at that point, and will be able to determine the slope from a graphic representation and also analytically. They will be able to write the equation of the tangent line to a curve at a given point.

SLO3: Student will be able to determine when the limit of a function exists and when it doesn't, and to find limits algebraically and also from the graph of a function.

SLO 4: Students will be able to determine derivatives of simple functions using the limit definition, and will be able to apply the different rules of differentiation (power, product, quotient, chain)

SLO 5: Students will be able to use the graph of a function to explain why a function is or is not continuous or differentiable at a point.

Course Goal #3: Applications of the Derivative

Addresses UNM core area 2/ HED area II: Mathematics (Calculus)

SLO 1: Students will be able to describe the graph of a function as increasing or decreasing, concave up or concave down and relate these descriptions to the first and second derivatives.

SLO 2: Students will be able to use the first and second derivative to find relative maxima, relative minima, and inflection points.

SLO 3: Students will be able to sketch the graph of a function using numbers 1 and 2 above.

SLO 4: Students will be able to solve optimization problems using the concept of derivative.

SLO5: Students will be able to analyze and solve real-world problems involving exponential growth and decay.

Course Goal #4: Integrals

Addresses UNM core area 2/ HED area II: Mathematics (Calculus)

SLO 1: Students will be able to find anti-derivatives of various types of functions.

SLO 2: Students will be able to use the Fundamental Theorem of Calculus and the rules of integration to evaluate definite integrals of simple functions.

SLO 3: Students will be able to find areas under curves, and use the definite integral to solve applied problems