

MTH 111 Winter 2006
MATHEMATICAL ANALYSIS I

12:00-12:50 pm MWF Room E200

PREREQUISITES: Level of competency equivalent to MTH 101. No reviewing of this material will take place in this class.

INSTRUCTOR: Dr. M. S. Skaff

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OFFICE HOURS: 11:30-12am MWF, 4-5pm MW, and any time the office door is open or by appointment.

TEXT BOOK: College Algebra: A Graphing Approach by Larson, Hostetler, and Edwards, 4th Edition, Houghton-Mifflin Publisher, 2005, ISBN: 0-618-39438-9

COURSE DESCRIPTION. This course presents the mathematics needed to understand and apply college algebra concepts in a real world setting. To be successful in the business world, students must be able to utilize mathematical concepts as they apply to real life problems. This course will emphasize these applications with many practical examples.

COURSE OBJECTIVES. To understand College Algebra topics such as Functions, Solving Equations and Inequalities, Linear Systems and Matrices, Sequences, Series, Probability, and Conic sections. The student will develop an expertise in utilizing functions to solve real world problems. This includes both theoretical and practical understanding of functions including continuity, graphing, and combinations. Polynomial, rational, exponential, and logarithmic functions will be emphasized.

COURSE OUTCOMES. After taking this course, a student should be able to understand the following:

1. What is a function.
2. How to graph a function.
3. Apply functions to model real world problems.
4. Solve both equations and system of equations.
5. Solve both inequalities and systems of inequalities.
6. Understand sequences and series as well as the concept of probability.
7. An introduction to the concept of Conics Sections.

EXAMINATIONS. There will be three (3) closed book hour examinations and a final exam. These tests will be taken using BLUEBOOKS. These bluebooks (4 of them) can be purchased in the book store. Do so no later than January 20, 2006. Put your name and MTH 111 on the cover. No books, computers, calculators, or dictionaries will be allowed on any examination. Students may bring a single 8.5x11 sheet of paper with notes for each exam. Exams will contain multiple choice and may contain true/false questions.

SPECIAL EXAM RULES. (1) Exams will start at 12 noon and end at 12:50pm. No extension of time will be allowed even if a student arrives late. Be on time. (2) Students are responsible for pencils or pens to take exams. None will be provided by the instructor. (3) No test will be given to a student who has not turned in a bluebook. (4) Tests will begin only after all materials are removed from the desktop. Any loss of time (due to excess talking or delays in removing materials) will not be made up. (5) One hour exam score may be dropped from calculation of final grade but not the final. If any exam is missed or not submitted, that exam is chosen as the “dropped” score. If more than two scores are missing, a grade of F will be given for the missing scores. (6) NO MAKEUP EXAMS will be given.

EXAM DATES. Please mark your calendars.

Exam 1. Wednesday February 8, 2006

Exam 2. Friday March 3, 2006

Exam 3. Friday April 7, 2006

Final Exam. Thursday April 27, 2006 11:00-12:50pm

GRADING. Each exam has 0-100 points, graded assignments will receive a numeric score, and class participation has 0-50 points. The total of these points will be assigned a grade as follows:

<u>Points</u>	<u>Grade</u>	<u>Points</u>	<u>Grade</u>
>280	A	230-239	C+
275-279	A-	160-229	C
270-274	B+	155-159	C-
250-269	B	120-154	D
240-249	B-	< 120	F

Note: Class participation includes attendance, attention, no late arrivals or early departures, no miscellaneous talking not related to the class lecture, and general interest in the class.

IMPORTANT FACTS.

Last day to drop class - Feb 3, 2006

No class Monday 01/16/06

Last day to withdraw with “W” - March 31, 2006

Final Exam week- April 24-29, 2006

ACADEMIC INTEGRITY. Everything submitted for grading is expected to be a student’s own work. Anything suspected as being otherwise the case will be dealt with according to University and College policies.

SECTIONS by DATE SCHEDULE.

Date	Section(s)	Date	Section(s)	Date	Section(s)
01/11/06	1.1	02/10/06	3.1	03/13/06	5.1, 5.2
01/13/06	1.2	02/13/06	3.2	03/15/06	5.3
01/18/06	1.3, 1.4	02/15/06	3.3, 3.4	03/17/06	5.4
01/20/06	1.5, 1.6	02/17/06	3.5	03/20/06	5.5
01/23/06	1.7	02/20/06	3.6	03/22/06	5.6, 5.7
01/25/06	2.1, 2.2	02/22/06	4.1	03/24/06	5.8
Cryptography					
01/27/06	2.3	02/24/06	4.2-4.3	03/27/06	6.1
01/30/06	2.4	02/27/06	4.4	03/29/06	6.2
02/01/06	2.5	03/01/06	Review	03/31/06	6.3
02/03/06	2.6	03/03/06	Exam 2	04/03/06	6.4
02/06/06	Review			04/05/06	Review
02/08/06	Exam 1			04/07/06	Exam 3
				04/10/06	7.1
				04/12/06	7.2

04/17/06, 04/19/06, 04/21/06 Faculty evaluation and Review

EXERCISES. Students should do as many exercises as possible. Selected exercises may be submitted for a grade. Use the exercises in the chapter review to test your understanding of the material. The instructor will solve a sampling of problems during each class. Understanding these solved examples will be necessary to pass the exams.

Sec Exercises	Sec Exercises	Sec Exercises	Sec Exercises
1.1 13-18, 21,27,31	3.1 1-8,15,19,29,33,41,43,57	5.1 3,7,15,29,39,57,63,67	7.1 3,7,13,27,77
1.2 9,19,25,35,53,55	3.2 1-9,29,39,55,79,87	5.2 3,9,19,21,35,45,57	7.2 9,13,17,43,51
1.3 5,9,19,25,33,37,41,47,53,83	3.3 3,9,15,25,31,39,45,49,71	5.3 3,7,11,19,23,49,61,71,81	69
1.4 3,5,13,25,45,53,67	3.4 3,7,15,45	5.4 3,9,15,21,23,49,61,67	
1.5 5,13,21,29,35,41,53,57,61	3.5 1-12,17,27,33	5.5 3,9,15,23,27,31,35,57	
1.6 3,9,19,37,43,69,79	3.6 15,21,25,33,43,47	5.6 3,7,9,15,21,33	
1.7 5,11,17,27,45,75	3.7 1-6	5.7 5,9,17,19,23,31	
2.1 5,9,13,23,35,39,43	4.1 7,11,13,19,39,51	5.8 3,7,11,17,27	
2.2 5,9,15,25,29,35,55,73	4.2 3,11,17,19,25,29,35,41,45	6.1 7,15,21,39,45,53,57,69,75,91,101	
2.3 3,9,21,33,39,47,55,61,67	4.3 17,19,21,35,53,59,67,75	6.2 5,13,19,35,53	
2.4 9,19,27,49,55,67,75	4.4 7,9,15,17,23,31,39,57,89	6.3 5,13,45,57,61,73	
2.5 1-4,7,15,31,39,49,61	4.5 1,3,5	6.5 5,17,27,45,47,67	
2.6 1,3,5	4.6 1-8	6.6 13,17,27,45,51	
		6.7 7,13,17,21,25,27	