

**COURSE NUMBER AND TITLE:** MATH 1111 College Algebra

**CREDIT HOURS:** 3

**COURSE DESCRIPTION:** An intensive functional approach to algebra that incorporates the use of appropriate technology. More focus will be placed on the study of functions and their graphs, inequalities, polynomials, linear, piecewise defined, rational, exponential, and logarithmic functions. (Credit will not be given for both MATH 1101 and MATH 1111).

**PREREQUISITES:** Placement or the successful completion of MATH 0099

**SUGGESTED TEXT:** College Algebra, 7<sup>th</sup> edition, by Michael Sullivan, Prentice Hall, 2005.

**COURSE OUTLINE:**

- Review of exponents, radicals, polynomials, factoring, and polynomial division
- Solving Equations (Linear, Quadratic, Radical, Quadratic in form, Factorable, Absolute Value)
- Solving Inequalities (Linear, Absolute Value, Polynomial, Rational)
- Applications (Simple and Compound Interest, Uniform Motion, Constant Rate Jobs, Mixture)
- Graphing on the Rectangular Coordinate System (Lines, Circles)
- Functions (Graphing, Composite, One-to-one, Inverse)
- Exponential and Logarithmic Functions (Graphing, Properties, Solving equations)
- Systems of Equations and Inequalities
- Linear Programming

# Augusta State University

Fall 2009

## MATH 1111

Instructor: Wafa Abed

Office hours: 11:30 – 12:30 M, T, W, R

Room: N207

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Text: College Algebra, 7<sup>th</sup> edition or Augusta State Second Custom Edition, by Michael Sullivan.

Class	Date	Section	Topic	Pages	Suggested Problems
1		R2	Algebra Review	26-28	1-4,6-8,10,23-55 odd, 73-117 odd
2		R4	Polynomials	42-43	1-87 odd, *89-93
		R5	Factoring Polynomials	50-52	1-4,5-127 odd
		R6	Polynomial Division; Synthetic Division	57-58	1-4, 5-41 odd
3		R7	Rational Expressions	68-69	1-4, 5-*91 odd, *95
4		R8	n <sup>th</sup> Roots; Rational Expressions	75-77	1-4, 5-73 odd, *79, *99, *101
<b>5</b>			<b>Test 1</b>		
6		1.1	Linear Equations	93-95	1-49 odd, 53-57 odd, 61, 65, 67, 77, 79, 81, *83-97 odd
7		1.2	Quadratic Equations	106-108	1-8, 9-33 odd, 47-67 odd, 75-91 odd
8		1.3	Quadratic Equations in the Complex Number System	116-117	1-31 odd, 47, 49, 53- 65 odd
9		1.4	Radical Equations	123-124	1-6, 7-85 odd
<b>10</b>			<b>Test 2</b>		
11		1.5	Solving Inequalities	133-136	1-10, 11-83 odd
12		1.6	Equations with     and Inequalities	139-140	1-25 odd, 31-43 odd
<b>13</b>		1.7	Applications	147-150	1-49 odd
			<b>Test 3</b>		
14		2.1	Rectangular Coordinates	163-164	1-45 odd
15		2.2	Intercept	169	37,41
		2.3	Circles	179-180	1-47 odd
		2.4	Lines	190-193	1-81 odd
16		2.5	Parallel and Perpendicular Lines	197-198	1-33 odd
MT <b>17</b>		2.7	Applications	209-211	1-35 odd
			<b>Test 4</b>		

18		3.1	Functions	228-231	1-69 odd, 73,75,79
		3.2	Graphs of Functions	236-239	1-27 odd
19		4.1	Quadratic Functions and Models	306-309	1-17 odd, 35-65 odd, 71,72
20		4.6	The Real Zeros of a Polynomial Function	374-375	1-19 odd
21		5.1	Composite Functions	397-399	1-43 odd
		5.2	Inverse Functions	409-411	1-43 odd, 47-59 odd, *71
22		7.1	System of Linear Equations	544-547	1-59 odd
23		7.7	System of Inequalities	614-616	1-15 odd, 23-27 odd, 35-45 odd
24		7.8	Linear Programming	622-623	1-25 odd
<b>25</b>			<b>Test 5</b>		
26		5.3	Exponential Functions	423-427	1-19 odd, 29,33, *75-79 odd
27		5.4	Logarithmic Functions	437-441	1-55 odd, 57-60, 89
28		5.5	Properties of Logarithms	448-449	1-29 odd, 31-71 odd
29		5.6	Logarithmic and Exponential Functions	454-455	1-33 odd Page 425: 53-65 odd Page 439: 91-111 odd
<b>30</b>		5.7	Compound Interest	462-464	1-37 odd
			<b>Test 6</b>		
31			Optional Exam Review		
			Departmental Exam		

The \* indicates and application exercise

A scientific calculator is required for MATH 1111. The TI-83 or TI-83 plus is preferred and allowed for use on the final test.

Cell phones should be turned off in the class room. Be prompt on arrival. If you must leave early let your instructor know before the class begins.

**ADDITIONAL INFORMATION:**

Monday, 8/ 17/ 2009: Classes Begin

Monday, 9/7/2009: Labor Day

Wednesday, 11/ 25/ 2009 – Friday, 11/ 28/ 2009: Thanksgiving Holiday

Thursday, 12/3/ 2009: Classes End

Monday, 12/7/2009: Math 1111 Final Exam at 7:00 am – 9:00 am.

Monday, 12/7/2009 – Thursday,12/10/2009: Final Exams

## **Tests**

There will be 6 chapter tests and a midterm test, and one final exam. One chapter test with minimum score will be dropped. The midterm test cannot be dropped.

## **Final Exam**

The final exam is a comprehensive test. See the departmental E-Mail for information about the final exam and the grading policy for it. There are final exam examples available in the back of your text book. If the final exam is missed, a grade of "F" will be recorded for the course grade.

## **Grading Policy**

Chapter tests:	50%
Midterm:	10%
Final Exam:	30%
<u>Quizzes and HW:</u>	<u>10%</u>
Total	100%

The letter grade will be awarded according to the standard grading policy:

A: 90 and above      B: 80-89      C: 70-79      D: 60-69      F: Below 60

## **Attendance**

Attendance will be taken every day. Good attendance will reward you extra points on your final grade.

## **Withdrawal**

Dropping or withdrawing from the class must be initiated by the student by requesting that from the registrar and signing it from the instructor. If a student is absent more than 10% of the classes by, then the instructor reserves the right to withdraw the student.

## **Math lab**

There is a math lab located in the Allgood Hall room N337 available for additional help (free tutoring) outside the class room.

## **Review Sheet**

For each chapter test, review sheets and sample tests are available in the back of your text book

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<b>Week of</b>	<b>Mon. / Tues.</b>	<b>Wed./Thurs.</b>
17 Aug	R2, R4	R5,R6
24 Aug	R7	R8
31 Aug	<b>Test 1</b>	1.1
7 Sept	1.2	1.3
14 Sept	1.4	<b>Test 2</b>
21 Sept	1.5	1.6,1.7
28 Sept	<b>Test 3</b>	2.1,2.2
5 Oct	2.3,2.4	2.5,2.7
12 Oct	<b>Test 4</b>	3.1,3.2
19 Oct	4.1	4.6
26 Oct	5.1,5.2	7.1
2 Nov	7.7	7.8
9 Nov	<b>Test 5</b>	5.3
16 Nov	5.4	5.5
23 Nov	5.6,5.7	Holiday
30 Nov	<b>Test 6</b>	Optional Exam Review
7 Dec	Final Exam 7:00am - 9:00am	