

MIDDLESEX COUNTY COLLEGE  
EDISON, NEW JERSEY  
MATHEMATICS DEPARTMENT

Date: Spring 2010

Course Title: Algebra II

Course No. MAT 014

Class Hours: 4

Laboratory Hours: 0

Credit Hours: 0

Department Head Approval: \_\_\_\_\_  
Maria DeLucia, Ph.D.

Dean Approval: \_\_\_\_\_  
Reginald Luke, Ph.D.

**Prerequisite**

Mat 013 or appropriate score on college placement test.

**Textbook of Course**

**Author:** Larson

**Title:** Intermediate Algebra, 5<sup>th</sup> Edition

**Publisher:** BROOKS/COLE CENGAGE Learning

**Supplies**

TI-83/84 Graphing Calculator Required

**Catalog Course Description**

Topics include: A review of elementary algebra, the coordinate plane and functions, linear equations and inequalities, properties of lines, systems of linear equation, polynomials, rational expressions and quadratic equations. The use of a graphing calculator is essential.

**Objectives of Course**

This second of a two-course sequence in algebra is designed to polish skills developed in Algebra I and elevate them to a higher level of mathematical sophistication through the use of lecture, group work, and the calculator. The course provides the opportunity for the student to develop an understanding of algebra and apply it to realistic problem situations. The student will be prepared to use algebra as a meaningful tool in future college work. The student will develop analytical, oral and written skills as they pertain to algebra and mathematics in general.

**Grading Criteria**

1. In order for a student to be considered remediated in MAT-014, a student has to achieve a minimum grade of "C" in the course. Please make sure that your students are made aware of this at the beginning of the semester. This information should be in writing for the students in the course outline, which you will be giving them the first day of class. Since there are some students who miss the first few sessions of class, it would be helpful to mention these guidelines several times throughout the semester.
2. TESTS- 50%
3. \*QUIZZES, HOMEWORK, CLASS PARTICIPATION, ETC. - 25%
4. FINAL EXAM - 25%
5. Grades should be assigned as follows:

92% - 100%	A	77% - 78%	C+
89% - 91%	A-	70% - 76%	C
87% - 88%	B+	60% - 69%	D
82% - 86%	B	below 60%	F
79% - 81%	B-		

The grading criteria, a semester outline, cheating policy, and any other important information (office hours, if applicable) should be given to the students on the first day of class in written form.

**HOMEWORK**

Suggested homework assignments are included with the syllabus.

**Final Examination**

The final exam will be administered during the last class meeting and are a requirement of the course. Final exams will be ordered for you. Information on picking up your final exams will be sent to you toward the end of the semester. **A minimum of 60% on the Final Exam is required to pass the class with a grade of C or better.**

**Review Packets** for the final exam are available in Center II.

**Additional Materials**

1. A student solutions manual is available for students. It is packaged free with the text.
2. Enhanced WebAssign, an online homework and grading program and it is packaged free with the text.

**Suggested Day-To-Day Course Outline**

DAY	SECTIONS	TOPICS
1	Introduction, 1.4, 1.5	Algebraic Expressions, Constructing Algebraic Expressions
2	2.1, 2.2	Linear Equations, Linear equations and Problem Solving
3	2.3, 2.4	Business and Scientific Problems, Linear Inequalities
4	2.5, 3.1	Absolute Value Equations and Inequalities, The Rectangular Coordinate System
5	3.2, 3.3	Graphs of Equations, Slope and Graphs of Linear Equations
6	3.4, Review	Equations of Lines
7	<b>TEST # 1</b>	
8	3.6, 3.7*	Relations and Functions, Graphs of Functions *(Omit transformations)
9	4.1, 4.2, 4.3 show matrix key on calculator	Systems of Equations, Linear Systems in Two Variables, Linear Systems in Three Variables (Show matrix key on calculator)
10	5.1, 5.2	Integer Exponents and Scientific Notation, Adding and Subtracting Polynomials
11	5.3, 5.4	Multiplying Polynomials, Factoring by Grouping and Special Forms
12	5.5, 5.6	Factoring Trinomials, Solving Polynomial Equations by Factoring
13	Review	
14	<b>TEST # 2</b>	
15	6.1, 6.2	Rational Expressions and Functions, Multiplying and Dividing Rational Expressions

16	6.3, 6.4	Adding and Subtracting Rational Expressions, Complex Fractions
17	6.5, 6.6	Dividing Polynomials and Synthetic division, Solving Rational Equations
18	7.1,7.2	Radicals and rational Exponents, Simplifying Radical Expressions
19	7.3 Review	Adding and Subtracting Radical Expressions
<b>20</b>	<b>TEST # 3</b>	
21	7.4, 7.5	Multiplying and Dividing radical Expressions, Radical equations and Application
22	7.6, 8.1	Complex Numbers, Solving Quadratic Equations: Factoring and Special Forms
23	8.2, 8.3	Completing the Square, The Quadratic Formula
24	8.5	Applications of Quadratic Equations
25	Catch-up, Review	
<b>26</b>	<b>TEST # 4</b>	
27	Review for final	
<b>28</b>	<b>FINAL EXAM</b>	