MIDDLESEX COUNTY COLLEGE
EDISON, NEW JERSEY

MATHEMATICS DEPARTMENT

Date: Spring 2010

Course Title: Algebra II (Part B)

Course No. MAT 014B

Class Hours: 4 **Laboratory Hours:** 0 **Credit Hours:** 0

Department Head Approval: _____
Maria DeLucia, Ph.D.

Dean Approval: _____
Reginald Luke, Ph.D.

Prerequisite

Grade of "C" or better in MAT-014A, or permission of Mathematics Department Chair.

Textbook of Course

Author:	Larson
Title:	Intermediate Algebra, 5TH Edition
Publisher:	BROOKS/COLE CENGAGE Learning

Supplies

TI-83/84 Graphing Calculator Required

Catalog Course Description

This the second part of a two semester course in Algebra II 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. Topics include: rational exponents, radical expressions, radical equations, quadratic equations, rational expressions, rational equations and complex fractions. The use of a graphing calculator is essential.

Grade Requirement

A "C" is the minimum acceptable grade for completion of the remedial/development level or movement to a credit course.

Behavioral Objectives

The student will be able to:
1. Simplify expressions containing rational expressions.
2. Convert rational exponents to radical expressions.
3. Add, subtract, multiply and divide radical expressions.
4. Solve radical equations graphically and algebraically.
5. Solve quadratic equations by various algebraic methods and graphically.
6. Add, subtract, multiply and divide rational expressions.
7. Solve rational equations algebraically and graphically.
8. Solve verbal problems dealing with radical, rational, and quadratic equations.

Grading Criteria

4 Tests- 50%

*Quizzes, Homework, Class Participation, etc. - 25%

Final Exam – 25%

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-**		

Tests

There are four tests. Each instructor is responsible to produce his or her own tests.

Quizzes

It is suggested that quizzes be given throughout the course for early assessment.

Homework

Suggested homework assignments are included with the syllabus as review problems. Homework should be assigned each class meeting, from each section and periodically checked. Whether textbook assignments are graded or not, students should be made aware that doing homework is of the utmost importance in order to solidify learned skills and to provide a strong foundation upon which they can learn new material.

Attendance

There is no official attendance policy. However, students should be made aware of how important attendance is for their success. Some instructors build in extra quizzes to encourage good attendance. Whatever you choose, some students will have attendance problems and the issue needs to be addressed.

Final Exam

The Final Exam is a two-hour departmental final and will be administered during the last class session. It is a requirement of the course and will test all algebra material from both MAT 014A and 014B. **A minimum of 60% on the Final Exam is required to pass the class with a grade of C or better.**

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.

Extra Help

Students should be informed where they can get help if they have difficulty with the subject matter. Some suggestions are:

1. If you are a full-time instructor, students should be encouraged to come for help during your office hours.
2. Faculty volunteer and peer tutoring is available in the Johnson Learning Center.
3. Professional tutors are available in the Developmental Mathematics Lab/Tutoring Center in MH 142. In addition to tutoring, students have access to computers on which they will be able to review and practice the skills they have learned in class. They will be able to work on software programs that are aligned with their textbooks. If you would like your class to meet in the lab for an orientation session, contact a lab staff member at x3807.
4. Students should be encouraged to use the software, which comes with the textbook to reinforce their skills at home.
5. Students should be encouraged to work in study groups. This will be fostered if you allow students to work in groups, at times, during your class sessions especially on review days before a test.

End of Semester Procedure

Review packets for the final exam are available in Center II. You will be asked to submit an end of year summary.

MAT 014B Suggested Day-to-day Schedule

DAY	SECTION	TOPIC
1	Introduction, Review 5.1, 5.2	Integer exponents and scientific Notation, Adding and Subtracting Polynomials
2	Review 5.3, 5.4	Multiplying Polynomials, factoring by Grouping and Special Forms
3	Review 5.5, 5.6	Factoring Trinomials, Solving Polynomials equations by factoring
4	6.1	Rational Expressions and Functions
5	6.2, Review for test # 1	Multiplying and Dividing Rational Expressions
6	**TEST # 1 (Ch. 5 & 6.1-2)**	
7	6.3	Adding and Subtracting rational Expressions
8	6.4	Complex Fractions
9	6.5	Diving Polynomials and Synthetic Division
10	6.6	Solving Rational Equations
11	Review Chapter 6	
12	**TEST # 2 (Ch. 6)**	
13	7.1, 7.2	Radical and Rational Exponents, Simplifying radical Expressions
14	More 7.2, 7.3	Adding and Subtracting Radical Expressions
15	7.4	Multiplying and Dividing radical Expressions
16	7.5	Radical Equations and Applications
17	7.6	Complex Numbers
18	Review Ch. 7	
19	**TEST # 3 (Ch. 7)**	
20	8.1	Solving Quadratic Equations: Factoring and Special Forms
21	8.2	Completing the square
22	8.3	The Quadratic Formula
23	8.5	Applications of Quadratic Equations
24	Review Ch. 8	
25	**TEST # 4 (Ch. 8)**	
26	Final Review	
27	Final review	
28	**FINAL EXAM**	