



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.

Date: Fall 2009

Dean Approval: _____
Reginald Luke, Ph.D.

Prerequisite

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

Textbook of Course

<u>Author</u>	<u>Title</u>	<u>Publisher</u>
Larson, Hostetler, Neptune	<u>Intermediate Algebra Graphs and Functions</u>	Houghton-Mifflin – 3rd Edition

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

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 **three** 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 departmental final. The two-hour final exam will be administered during the exam period for all day session classes and during the last class session for all other sessions.

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. HM3 CD-ROM is an interactive software tutorial program and it is packaged free with the text.
3. Free online tutoring is available at:
[HTTP://WWW.SMARTHINKING.COM/HOUGHTON.HTML](http://www.smarthinking.com/houghton.html). The Passkey is included 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.

<u>DAY</u>	<u>TOPIC</u>	<u>SECTION</u>	<u>HOMEWORK</u>
1	Review chap. 1,2		p. 158: 1-20
2	Review chap. 3,4		p. 303-304: 1-8, 24-33, 35-38
3	Integer exponents and scientific notation	5.1	p. 311-312: every other odd number
4	Rational exponents	5.2	p. 321-322: 35-41, 67-92
5	Radicals	5.2	p. 321-322: 7-30, 51-66, 105-112
6	Simplifying and combining radicals	5.3	p. 329-330: every other odd number
7	Multiplying and dividing radicals	5.4	p. 337-338: every other odd number
8	Solving radical equations	5.5	p. p. 346: every other odd number
9	Complex numbers	5.6	p. 354-355: every other odd number
10	Review	Review ex. P. 357-359	p. 360: 1-20
11	Test # 1 Chapter 5		
12	Solving quadratic equations by taking square root	6.1	p. 372-374: every other odd number
13	Completing the square	6.2*(Optional)	p. 381-382: every other odd number
14	The quadratic formula; the discriminant	6.3	p. 389-390: every other odd number
15	Applications of quadratic equations	6.4	p. 397-399: every other odd number
16	Review	Review ex.: p. 422-423: 1-78	p. 425: 1-13, 16,17
17	Test # 2 Chapter 6		
18	Simplifying rational expressions	7.1	p. 435-436: every other odd number
19	Multiplying and dividing rational expressions	7.2	p. 443-444: every other odd number
20	Adding and subtracting rational expressions	7.3	p. 452-454: every other odd number
21	Complex fractions	p. 442; p. 450-451	p. 444: 51.53; p.453: 79-93 odd
22	Dividing polynomials	7.4	p. 463-464: every other odd number
23	Solving rational equations	7.5	p. 474-475: every other odd number
24	Graphing rational functions	7.6*(Optional)	p. 483-485: every other odd number
25	Review	Rev. ex.: p. 494-496: 1-88	p. 497: 1-16
26	Test # 3 Chapter 7		
27	Final Review		
28	FINAL EXAM		