

MAT 137 T4 - 11375 Intermediate Algebra
Three Rivers Community College

3 Credits
Spring 2015

Instructor: Michael Bergwell Class Time: 3:30-4:45
Office: C158 Course Location: D122
Telephone: 860-215-9408
E-mail: mbergwell@trcc.commnet.edu
Office Hours: M 11-12 TR 1-2 W 5-6

COURSE DESCRIPTION

A graphing calculator is required. This course continues the development of algebraic skills and concepts. The topics include: linear equations, functions and graphs, applications of systems of equations, inequalities, rational expressions and equations, operations of radicals and rational exponents, quadratic equations, exponential and logarithmic functions.

PREREQUISITE

Acceptable placement score or Math 095 with a “B-” grade or better.

TEXTBOOK

Elementary & Intermediate Algebra 5th edition – Baratto Bergman

COURSE OUTCOMES

Linear Functions

- 1) Provide multiple representations (e.g., words, symbols, graphs, tables) of linear functions by hand and/or using technology
- 2) Determine identifying characteristics of linear functions
- 3) Model and solve real world applications with linear functions (e.g., car depreciation) and systems of linear equations

Quadratic Functions and/or Expressions

- 1) Provide multiple representations of quadratic functions or expressions by hand and/or using technology
- 2) Determine identifying characteristics of quadratic functions or expressions (e.g., factors)
- 3) Evaluate, simplify, and perform operations on quadratic functions or expressions
- 4) Solve quadratic equations algebraically (e.g., factoring, completing the square, and quadratic formula with rational solutions) and/or graphically
- 5) Solve real world applications involving quadratic equations and functions

Exponential Functions and/or Expressions

- 1) Provide multiple representations (e.g., tables, graphs, symbols) of exponential functions or expressions by hand and/or using technology
- 2) Determine identifying characteristics of exponential functions or expressions
- 3) Evaluate, simplify, and perform operations on exponential functions or expressions
- 4) Identify real world applications involving exponential functions and/or solve graphically

Rational Functions and/or Expressions

- 1) Provide multiple representations of simple rational functions or expressions by hand and/or using technology
- 2) Determine identifying characteristics of rational functions or expressions
- 3) Evaluate, simplify, and perform operations on simple rational functions or expressions
- 4) Solve simple rational equations algebraically and/or graphically
- 5) Solve real world applications involving rational functions

Radical Functions and/or Expressions

- 1) Provide multiple representations of simple radical functions or expressions by hand and/or using technology, with primary emphasis on square root
- 2) Determine identifying characteristics of radical functions or expressions
- 3) Evaluate, simplify, and perform operations on simple radical functions or expressions
- 4) Solve simple radical equations algebraically and/or graphically
- 5) Solve real world applications involving radical functions
- 6) Identify imaginary numbers

Mathematical Practices

- 1) Make sense of problems and persevere in solving them.
- 2) Reason abstractly and quantitatively.
- 3) Construct viable arguments and critique the reasoning of others.
- 4) Model with mathematics.
- 5) Use appropriate tools strategically.
- 6) Attend to precision.
- 7) Look for and make use of structure.
- 8) Look for and express regularity in repeated reasoning

Sections Covered

Section	Page	Homework Problems (For practice – not graded)
6.1	486	1-97 odd
6.2	497	1 – 85 odd
6.3	507	1-85 odd
6.4	517	1-121 odd
6.5	524	1-91 odd

Section	Page	Homework Problems (For practice – not graded)
6.6	537	1-125 odd
7.1	560	1-63 odd
7.2	573	1-41 odd
7.3	584	1-23, 33-65, 87-91 odd
7.4	593	1-63 odd
7.5	603	1-105 odd
7.6	611	1 – 49 odd
8.1	633	1-19, 33-43, 55-67 odd
8.2	652	1-81 odd
8.3	665	1-55 odd
8.4	678	1-35, 41-47 odd
9.1	698	1-81 odd
9.2	710	1-43 odd
9.3	721	1-59 odd
9.6	762	1-65, 69-77, 83 odd
10.4	819	1-63 odd

Tentative Exam Dates

Exam 1 – February 23rd (6.1-6.6)

Exam 2 – March 30th (7.1-7.6)

Exam 3 – April 29th (8.1-8.4 & 9.1-9.3)

Final Exam – May 18th (Final exam is cumulative)

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Methods of Evaluation/Make-ups

Quizzes will be given at the end of every non-exam week. In-class quizzes cannot be made up. Your lowest two quiz grades will be dropped. Exams cannot be made up. If a student misses one of the first three exams, the final exam will take its place. Students that take all the exams may use their final exam to replace their lowest regular exam grade. Final grades will be assigned according to the following:

<u>Weighting</u>	<u>AVERAGE</u>	<u>FINAL GRADE</u>
Exams – 60%	90 -100	A- / A
Quiz Total – 20%	80 - 89	B- / B+
Final Exam – 20%	70 - 79	C- / C+
	60 - 69	D- / D+
	Below 60	F

Statement on Disabilities

If you are a student with a disability and believe you will need accommodations for this class, it is your responsibility to contact the Disabilities Counseling Service at 383-5240. To avoid any delay in the receipt of accommodations, you should contact the counselor as soon as possible. Please note that I cannot provide accommodations based upon disability until I have received an accommodation letter from the Disabilities Counselor. Your cooperation is appreciated.

Class Cancellation

The Three Rivers web site provides a full listing of radio and television stations that alert students to school closings and delays. Go to: www.trcc.commnet.edu and click on General Information and Weather Procedures.