

**Three Rivers Community College**  
**Mathematics K137- Intermediate Algebra**  
**Spring 2016**

**Instructor Information**

Name: Ms. Sandy Jaros  
Phone: 860-377-7896 (cell)  
Email: sjaros@qvcc.commnet.edu

**Course Information**

Title: Intermediate Algebra  
Section: T8  
CRN: 10762  
Credits: Three  
Room: E221  
Day/Time: TR 11:00 am-12:15 pm  
Office Hours: By appointment

**Prerequisite**

MAT\* K095 or MAT\* K095I with a "B-" grade or better or appropriate placement through multiple-measures assessment process.

**Required Textbook**

Baratto, Stefan, Bergman, Barry *Elementary and Intermediate Algebra*, 5th ed.  
New York: McGraw-Hill, 2014.

**Course Catalog Description**

This course cultivates understanding and different representations of functions. The course covers linear, quadratic, exponential, rational, radical functions, equations and expressions and operations on them with emphasis on modeling and solving real world problems.

**Final Course Evaluation**

Homework Assignments: 20%  
Tests: 40% (each test is based on 100 points)  
Final Exam: 40%

**Grades:**

A	93-100	B+	87-89	C+	77-79	D+	67-69
A-	90-92	B	83-86	C	73-76	D	63-66
		B-	80-82	C-	70-72	D-	60-62
						F	Below 60

## Course Objectives and Outcomes

At the completion of MAT\*137, the student will be able to do the following —

### 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.

## **Academic Integrity**

Academic integrity is essential to a useful education. Failure to act with academic integrity severely limits a person's ability to succeed in the classroom and beyond. Furthermore, academic dishonesty erodes the legitimacy of every degree awarded by the College. In this class and in the course of your academic career, present only your own best work; clearly document the sources of the material you use from others; and act at all times with honor. Please refer to this site for further information:

[http://catalog.threerivers.edu/content.php?catoid=2&navoid=54#Academic\\_Integrity\\_Policy](http://catalog.threerivers.edu/content.php?catoid=2&navoid=54#Academic_Integrity_Policy)

Cell phones or cell text devices, beepers, music devices are not appropriate in class. They should be turned off (or on vibrate for emergencies) and stored off the class desk.

## **Attendance**

You are expected to attend each class. Essential factors of your success in this course are your attendance and attention to the information shared in each class. If you miss a class you are responsible to obtain any missed information.

## **Special Arrangements**

If you have a disability that may require accommodations, services for students with disabilities are coordinated through the Counseling Center. In accordance with federal law, students with documented disabilities may request reasonable accommodations. Students are required to submit a Self Disclosure Form, provide documentation, and meet with a Disability Service Provider before the start of the semester, if possible. Please call the Counseling Center at (860) 215-9017 for more information.

## **Disability Support Services**

Chris Scarborough, Learning Disabilities Specialist (Students with Learning Disabilities, Autism or Attention Deficit Disorder)

(860) 215-9289

[cscarborough@threerivers.edu](mailto:cscarborough@threerivers.edu)

Matt Liscum (Students with Physical, Medical, Sensory or Psychiatric Disabilities)

(860) 215-9265

[mliscum@threerivers.edu](mailto:mliscum@threerivers.edu)

**Non-Discrimination Policy**

Please refer to this site for details:

[http://www.trcc.commnet.edu/president/policies/college\\_policies.shtml#Affirmative](http://www.trcc.commnet.edu/president/policies/college_policies.shtml#Affirmative)

**Digication**

All students are required to maintain an online learning portfolio in Digication that uses the college template. See this site for further details:

[http://www.trcc.commnet.edu/Div\\_IT/EducationalTechnology/Digication.shtml](http://www.trcc.commnet.edu/Div_IT/EducationalTechnology/Digication.shtml)

**Inclement Weather Delays, Cancellations, and Closings**

<http://www.trcc.commnet.edu/president/policies/weather.shtml>

**Disclaimer**

The instructor maintains the right to adjust the course syllabus as needed. The syllabus provides a tentative framework.

### Tentative Schedule for Math K137-T8

Dates	Text Sections/ Tests	Topics
<b>R 1/21</b>	6.1	6.1 An Introduction to factoring
<b>T 1/26</b> <b>R 1/28</b>	6.3-6.4 6.2-6.5	6.3 Factoring: Trial and Error 6.4 Factoring: The ac method 6.2 Factoring special products 6.5 Factoring strategies
<b>T 2/2</b> <b>R 2/4</b> -Ch. 6 Hmwk/EC due	6.6; Review Ch. 6 Ch. 6 Test	6.6 Factoring and problem solving
<b>T 2/9</b> <b>R 2/11</b>	7.1-7.2 7.3-7.4	7.1 Roots and radicals 7.2 Simplifying radical expressions 7.3 Operations on radicals 7.4 Solving radical equations
<b>T 2/16</b> <b>R 2/18</b>	7.5-7.6 Review Ch. 7	7.5 Rational exponents 7.6 Complex numbers
<b>T 2/23</b> -Ch. 7 Hmwk/EC due <b>R 2/25</b>	Ch. 7 Test 8.1-8.2	8.1 Solving quadratic equations 8.2 The quadratic formula
<b>T 3/1</b>	8.3-8.4	8.3 An introduction to parabolas 8.4 Quadratic equations and problem solving
<b>R 3/3</b> <b>T 3/8</b> <b>R 3/10</b>	Special assignment	
<b>T 3/15</b> -Special assignment due <b>R 3/17</b> -Ch. 8 Hmwk/EC due	Review Ch. 8 Ch. 8 Test	
<b>T 3/22 Spring break-No class</b>		
<b>R 3/24 Spring break-No class</b>		
<b>T 3/29</b> <b>R 4/1</b>	9.1-9.2 9.2-9.3	9.1 Simplifying rational expressions 9.2 Multiplying and dividing rational expressions
<b>T 4/5</b> <b>R 4/7</b>	9.3; 9.6 Review Ch. 9	9.3 Adding and subtracting rational expressions 9.6 Rational equations and problem solving
<b>T 4/12</b> - Ch. 9 Hmwk/EC due <b>R 4/14</b>	Ch. 9 Test 10.4; 10.7	10.4 Exponential functions 10.7 Logarithmic and exponential equations
<b>T 4/19</b> <b>R 4/21</b> - Ch. 10 Hmwk/EC due	Review Ch.10 Ch. 10 Test	
<b>T 4/26</b> <b>R 4/28</b>	Review for Final Exam Review for Final Exam	
<b>T 5/3</b> -Last class	Review for Final Exam	

**Final Exam-TBD**