#### 11624 T8 TR 11:00 am - 12:15 pm E 221

INSTRUCTOR:

Dr. Kelly Molkenthin (pronounced "molk-in-tine") Office: C 234, 860-215-9455 Email: kmolkenthin@trcc.commnet.edu

Office Hours: Mondays: 11:00 am – 12:00 pm Tuesdays: 1:00 pm – 2:00 pm Wednesdays: 10:00 am – 11:00 am Thursdays: 1:00 pm – 2:00 pm and by appointment.

#### **REQUIRED MATERIAL:**

• The text is <u>Elementary and Intermediate Algebra, Graphs and Models</u>, 4th Ed., Bittinger, Ellenbogen, & Johnson, Pearson Addison Wesley, 2012. You can purchase a hardcover book with MyMathLab or just the electronic access kit.

• Access code for MyLab.

- **CALCULATORS**: Calculators will be needed for many homework problems and it is REQUIRED that you bring one to <u>every class</u> and <u>each exam</u>. Cell phones may **NOT** be used as calculators.
- **COMPUTERS**: Online homework will be assigned on a regular basis and will be completed using MyLab and Mastering at <u>www.pearsonmylabandmastering.com</u> (previously know as "Course Compass"). If you did not purchase a book which has an access code bundled with it, you will have to purchase an access code separately. To register with MyMathLab, you will need the following information:

### Course name: Intermediate Algebra - Spring 2014 T8

#### Course ID: molkenthin12908

Go to the above website and click on the tab *Student* under "Register". Be sure you have a valid email address, course ID and either an access code or credit card. Then click on "OK! Register now >". Enter the course ID (see above) then click on *Continue*. If you already have a Pearson account (you've used MyLab or Course Compass before), enter your user name and password and click "*Sign In*". If you do not yet have a Pearson account, click on *"create"* under "Create a Pearson Account". **Be sure to remember/record your user name and password. Forgetting your user name and/or password is NOT a valid reason for not completing assignments.** If you do not have an access code, you can purchase one now with a credit card by clicking on *Pay with a credit card or PayPal* under Enrollment Options. If you have an access code "under "Select an Option". Enter your six word access code when prompted, click *Next*, and follow the prompts to create your own login name and password. After you have registered, return to the above website and you can now log in. Go to the *Welcome Page*, click on your course, and then choose the *Installation Wizard* link to make sure your computer has the required set-up and plug-ins. **Technical support** for the company is at 1-800-677-6337, Monday through Friday, 9 am – 6 pm.

GRADING:	3 One-Hour Exams: Final Exam (cumulative): Weekly Quizzes MyLab Attendance and Participation:	300 points (100 each) 200 points 100 points 100 points 50 points
	Total:	750 points

Your final grade is the total number of points you have received divided by the total possible number of points. Final grades will be determined using the scale below:

$\textbf{A} \rightarrow 93\%$ and above	<b>A-</b> → 90 - 92%	
<b>B+</b> → 87 - 89%	$\mathbf{B}  ightarrow 83$ - 86%	<b>B-</b> → 80 - 82%
$C+ \rightarrow 77$ - 79%	$\mathbf{C}  ightarrow 73$ - 76%	<b>C-</b> → 70 - 72%
$\mathbf{D+}  ightarrow 67$ - 69%	$\mathbf{D}  ightarrow 63 - 66\%$	$D- \rightarrow 60-62\%$

EXTRA CREDIT: There will be no "extra credit" assignments for this course.

- ATTENDANCE: Attendance is required and will be taken for each class. An absence is excused ONLY for valid reasons (to be determined by the instructor) and if notification is given **PRIOR** to a missed class (via email, phone message **not** word of mouth from another student). \*\*All absences reported by phone or reported to instructor in person **must** be followed up with an email, or they will be considered unexcused. Oversleeping and "colds" are examples that are **not** valid reasons for an absence. Do you best to not miss ANY classes!! Students are allowed a maximum of 2 excused absences per semester, excused absences will not affect your attendance and participation grade. Unexcused absences will lower your attendance and participation grade.
  - \*\*\*<u>Also, if you miss a class it is **YOUR** responsibility to get the class notes from another student (refer to your class list) and **BE PREPARED** for the next class meeting (this includes taking the scheduled tests/quizzes).\*\*\*</u>

**Note**: Class BEGINS at 11:00am. It is expected that you will be in your seat and ready to go at 11:00 am. Students arriving after 11:00am will lose attendance points for that class. Excessive "lateness" will not be tolerated, it is disruptive to both the instructor and the class. Excessive lateness will result in classroom doors being closed and locked at 11:00 am.

**CLASS CANCELATION:** In the unlikely event that a class needs to be canceled by the instructor, a notice will be placed on the classroom door prior to the start of class. If time permits, you will be notified by the instructor via email as soon as possible prior to the canceled class. For college cancelations, pay attention to the radio & TV announcements, call the college's main phone number, 860-886-0177, or visit the college's home page, <u>www.trcc.commnet.edu</u>. It is also suggested all students register for <u>The myCommnet Alert Notification System</u>. This system is used to deliver important information to students, faculty, and staff regarding weather-related class cancellations. The system delivers both email messages, and text messages over cellular phones to those individuals who are registered. To register, log on to your myCommnet account at <u>http://my.commnet.edu/</u> and follow the link to myCommnet Alert.

- **STUDENT EMAILS:** Students are required to have a valid email. If it is necessary for me to email the entire class, I will use the "email class" prompt in MyLab, so be certain your email is current under your settings in MyLab.
- **HOMEWORK AND QUIZZES:** Homework (both from the text and online) will be assigned for every section we cover in the text. It is expected that you complete the online assigned problems by the due date on the assignment, and the homework in the text by the next class meeting.

<u>For the online homework</u>: For *most* assignments, you will have one week from the date in which the assignment was posted to complete your assignment for **full credit**. Once due dates have passed, assignments will remain open until the day of the exam which covers that material. This will give you the opportunity to complete any missed problems for ½ credit. \*\*Note: Deadlines for online homework will not go beyond the exam date for the exam that covers that material. All online assignments MUST be completed prior to taking the exam on that material. Watch your MyLab due dates carefully! All assignments are due by 11:00 am on due dates.

<u>For text homework</u>: Keep a separate notebook for your text homework. It is expected homework from your text is completed, or at least reasonably attempted, by the next class meeting. BE SURE TO CHECK YOUR ANSWERS IN THE BACK OF THE TEXT. If you check the problem in the back of the text and it is not correct, re-do the problem. If you are struggling with the assignment, you need to seek out help either from your instructor or the tutor center ASAP!

Our expectation is that you are spending 2-3 hours of reading and doing homework for this class for every "academic" hour we meet in class. We meet 3 "academic" hours per week, therefore you should expect to spend *at least* 6 - 9 hours per week on this class, outside of class meetings, every week!

**\*NOTE:** Class time is reserved for presentation of material. Homework questions will be answered outside class meetings.

Your in-class quizzes will be testing the concepts emphasized from class that week and your homework assignments. Make-ups for quizzes will be given in <u>extreme situations</u> and if arrangements are made with the instructor **prior** to the class meeting in which the quiz takes place. If you miss a class in which a quiz in given, DO NOT assume you will automatically be able to make up the quiz, it must be approved by the instructor. All make-ups must be completed before 8:00 am on the next scheduled class day after the missed quiz. Make-ups for quizzes will not be given if the absence on the quiz date is not an excused absence. You will be given 12 quizzes throughout the session, only your top 10 scores will count toward your final grade.

**EXAMS**: You will have three 1.5 hour exams and one 2 hour final exam. Exams are scheduled for the following dates:

- Exam 1: Tuesday 2/25
- Exam 2: Tuesday 4/8
- Exam 3: Tuesday 5/13
- Final Exam: Tuesday 5/20

This <u>may</u> change (but hopefully not), depending on how we are doing. Make-ups for exams will be given only in **EXTREME** circumstances and if **PREVIOUS** arrangements are made. No exam will be administered prior to the date/time of the scheduled exam and **if you miss an exam**, **you will receive a grade of 0 (zero)**. Your final exam is a **2 hour** final exam. You will need to sign up for a 2 hour block on Tuesday, 5/20, for your final exam. Please plan accordingly.

**RETENTION OF PAPERS:** Students are expected to retain all graded work until final grades are received.

**COMMUNICATION:** Verbal communication with the instructor regarding missed classes, quiz make-ups, special accommodations, etc. **must** be followed up with an email (<u>kmolkenthin@trcc.commnet.edu</u>) as soon as possible. This is essential!

- ACADEMIC DISHONESTY: Academic integrity is essential in all aspects of college coursework and learning. I have zero tolerance for academic dishonesty. It is expected that YOU complete all your assigned homework/labs. Communication or collaboration of ANY sort is ABSOLUTEY PROHIBITED during any quiz or exam. Academic Misconduct is punishable in a number of ways, including a score of a zero on the assignment where the cheating took place, a grade of an F in the course and/or possible censure on your permanent record. All cases of academic dishonesty will be referred to the Academic Dean. Do not let yourself come under the suspicion of academic dishonesty.
- **COURSE OBJECTIVES**: This course continues the development of algebraic skills and concepts. The topics include, but are not limited to: linear equations, functions and graphs, systems of equations, inequalities, rational expressions and equations, quadratic equations, exponential and logarithmic functions.

# COURSE 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 function 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

- **DIGICATION STATEMENT:** All students are required to maintain an online learning portfolio in Digication that uses the college template. Through this electronic tool students will have the opportunity to monitor their own growth in college-wide learning. The student will keep his/her learning portfolio and may continue to use the Digication account after graduation. A Three Rivers General Education Assessment Team will select and review random works to improve the college experience for all. Student work reviewed for assessment purposes will not include names and all student work will remain private and anonymous for college improvement purposes. Students will have the ability to integrate learning from the classroom, college, and life in general, which will provide additional learning opportunities. If desired, students will have the option to create multiple portfolios.
- ACCOMMODATIONS: Students with learning disabilities should contact the Learning Specialist, Chris Scarborough at 860-892-5751 or <u>cscarborough@trcc.commnet.edu</u> as soon as possible to ensure timely accommodations. Students with physical disabilities should contact Judy Hilburger at 860-383-5420 or via email at <u>jhilburger@trcc.commnet.edu</u> or Matt Liscum at 860-383-5420 or via email at <u>mliscum@trcc.commnet.edu</u> to facilitate accommodations. All testing/quizzing accommodations MUST be discussed with the instructor in a timely manner, that is, *at least* one to two class meetings prior to any scheduled test/quiz for which accommodations are needed.
- **CELL PHONE POLICY**: All cell phones must be turned OFF or MUTED before entering the classroom and properly placed in a bag or pocket (not left on a desk). Any cell phone ringing or beeping during a class is inappropriate and unacceptable. ANY cell phone use, especially texting, during class is also inappropriate and will not be tolerated. Students found using cell phones in any way in class may be asked to leave and will lose their attendance points for that class period. Cell phones may NOT be used for calculators in class.
- ACCEPTANCE POLICY: After reading this syllabus, choosing to stay registered for this course exemplifies your acceptance of the syllabus and all policies and consequences outlined in the syllabus, If you do not agree with any of the terms in the syllabus, you are free to withdraw.

\*\*The key to success in this course is to attend every class and do all the homework when it is assigned. Ask questions when you have them, either in class or in my office. You will find it much easier to learn the new topics if you consistently keep up with the course material and homework problems!\*\*

Week of:	Chapter(s):	Topics Covered:
1/23	3.2, 3.3	Graphing Equations, Linear Equations and Intercepts
1/28	3.5 – 3.8	Slope, Slope Intercept Form, Point-Slope Form, Functions <ul> <li>Quiz #1 – Thursday 1/30</li> </ul>
2/4	3.8, 5.3	Functions, Polynomials and Polynomial Functions ♦ Quiz #2 – Tuesday 2/4 No classes Thursday 2/6 – Professional Day!
2/11	6.1 – 6.6	Introduction to Polynomial Factorization and Equations, Trinomials: x <sup>2</sup> , Trinomials: ax <sup>2</sup> , Difference of Squares, Sums or Difference of Cubes ◆ Quiz #3 – Thursday 2/13
2/18	6.7, 7.1, 7.2	Applications of Polynomial Equations, Rational Expressions and Functions, Multiplication and Division ◆ Quiz #4 – Thursday 2/20 (no make-ups, in class only)
2/25	7.3 – 7.4	<ul> <li>Exam #1 – Tuesday 2/25 (Chapters 3, 5, 6)</li> <li>Addition, Subtraction and LCD's, Addition and Subtraction with Unlike</li> <li>Denominators</li> </ul>
3/4	7.6 – 7.8	Rational Equations, Applications using Rational Equations, Formulas <ul> <li>Quiz #5 – Thursday 3/6</li> </ul>
3/11	10.1 – 10.3	Radical Expressions, Functions and Models, Rational Numbers as Exponents, Multiplying Radical Expressions ♦ Quiz #6 – Thursday 3/13
3/18		No classes week of 3/17 - Spring Break!
3/25	10.4 – 10.7	Dividing Radical Expressions, Expressions Containing Several Radical Terms, Solving Radical Equations, Other Applications • Quiz #7 – Thursday 3/27
3/25 4/1	10.4 – 10.7 10.8, 11.1	Solving Radical Equations, Other Applications
		Solving Radical Equations , Other Applications <ul> <li>Quiz #7 – Thursday 3/27</li> </ul> <li>The Complex Numbers, Quadratic Equations</li>
4/1	10.8, 11.1	<ul> <li>Solving Radical Equations , Other Applications</li> <li>Quiz #7 – Thursday 3/27</li> <li>The Complex Numbers, Quadratic Equations</li> <li>Quiz #8 – Thursday 4/3 (no make-ups, in class only)</li> <li>Exam #2 – Tuesday 4/8 (Chapters 7, 10)</li> </ul>
4/1 4/8	10.8, 11.1 11.2, 11.3	<ul> <li>Solving Radical Equations , Other Applications</li> <li>Quiz #7 - Thursday 3/27</li> <li>The Complex Numbers, Quadratic Equations</li> <li>Quiz #8 - Thursday 4/3 (no make-ups, in class only)</li> <li>Exam #2 - Tuesday 4/8 (Chapters 7, 10)</li> <li>The Quadratic Formula, Studying Solutions to Quadratic Equations</li> <li>Quadratic Functions and Graphs, More About Quadratic Functions, Applications of Quadratic Equations</li> </ul>
4/1 4/8 4/15	10.8, 11.1 11.2, 11.3 11.6, 11.7, 11.4	<ul> <li>Solving Radical Equations , Other Applications</li> <li>Quiz #7 - Thursday 3/27</li> <li>The Complex Numbers, Quadratic Equations</li> <li>Quiz #8 - Thursday 4/3 (no make-ups, in class only)</li> <li>Exam #2 - Tuesday 4/8 (Chapters 7, 10)</li> <li>The Quadratic Formula, Studying Solutions to Quadratic Equations</li> <li>Quadratic Functions and Graphs, More About Quadratic Functions, Applications of Quadratic Equations</li> <li>Quiz #9 - Thursday 4/17</li> <li>Exponential Functions, Logarithmic Functions, Properties of Logarithms</li> </ul>
4/1 4/8 4/15 4/22	10.8, 11.1 11.2, 11.3 11.6, 11.7, 11.4 12.2 – 12.4	<ul> <li>Solving Radical Equations , Other Applications</li> <li>Quiz #7 - Thursday 3/27</li> <li>The Complex Numbers, Quadratic Equations</li> <li>Quiz #8 - Thursday 4/3 (no make-ups, in class only)</li> <li>Exam #2 - Tuesday 4/8 (Chapters 7, 10)</li> <li>The Quadratic Formula, Studying Solutions to Quadratic Equations</li> <li>Quadratic Functions and Graphs, More About Quadratic Functions, Applications of Quadratic Equations</li> <li>Quiz #9 - Thursday 4/17</li> <li>Exponential Functions, Logarithmic Functions, Properties of Logarithms</li> <li>Quiz #10 - Thursday 4/25</li> <li>Natural Logarithm, Solving Exponential and Equations</li> </ul>
4/1 4/8 4/15 4/22 4/29	10.8, 11.1 11.2, 11.3 11.6, 11.7, 11.4 12.2 – 12.4 12.5, 12.6	<ul> <li>Solving Radical Equations , Other Applications</li> <li>Quiz #7 - Thursday 3/27</li> <li>The Complex Numbers, Quadratic Equations</li> <li>Quiz #8 - Thursday 4/3 (no make-ups, in class only)</li> <li>Exam #2 - Tuesday 4/8 (Chapters 7, 10)</li> <li>The Quadratic Formula, Studying Solutions to Quadratic Equations</li> <li>Quadratic Functions and Graphs, More About Quadratic Functions, Applications of Quadratic Equations</li> <li>Quiz #9 - Thursday 4/17</li> <li>Exponential Functions, Logarithmic Functions, Properties of Logarithms</li> <li>Quiz #10 - Thursday 4/25</li> <li>Natural Logarithm, Solving Exponential and Equations</li> <li>Quiz #11 - Thursday 5/1</li> <li>Applications of Exponential Functions</li> </ul>

\*\*\*The instructor has the right to change/modify this syllabus at any time with proper notification to the class\*\*\*