MAT* K137 Intermediate Algebra Spring 2012

10635 T 6 MWF 10:00 – 10:50 am D 210

11991 T 19 MWF 11:00 – 11:50 am E 221

INSTRUCTOR: Dr. Kelly Molkenthin (pronounced "molk-in-tine")
Office: C 234, 860-892-5712
Email: kmolkenthin@trcc.commnet.edu

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Office Hours: Tuesdays 12:30 – 1:30 pm
Wednesdays 9:00 – 9:50 am
Thursdays 10:00 – 10:50 am
Fridays 12:00 – 12:50 pm
and by appointment.

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REQUIRED MATERIAL:

- *Intermediate Algebra, 4th Edition*. Jay Lehmann. Pearson Higher Educ & Prof Group, 2011. ISBN # 9780321744470 or 9780321620958

- Scientific calculator (must have "***e***" and *"ln"* button), graphing calculation (TI-83 or TI-83 plus preferred) for later use.

CALCULATORS: Calculators will be needed for many homework problems and it is REQUIRED that you bring one to **every class** and **each exam**. 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 **www.pearsonmylabandmastering.com** (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: **MAT 137 – Intermediate Algebra Spring 2012**

Course ID: **molkenthin75981**

Go to the above website and click on the tab *Student* under "Register". 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.** Enter the course ID (see above) under "Enroll in a New Course" then click on *Continue*. 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 (inside the cover of a new textbook), you are ready to register, so click *"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:

4 One-Hour Exams:	400 points (100 each)
Final Exam (cumulative):	150 points
Weekly Quizzes:	100 points (10 each)
MyLab	100 points
Attendance and Participation:	50 points
Total:	800 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:

A → 93% and above	**A-** → 90 - 92%	
B+ → 87 - 89%	**B** → 83 - 86%	**B-** → 80 - 82%
C+ → 77 - 79%	**C** → 73 - 76%	**C-** → 70 - 72%
D+ → 67 - 69%	**D** → 63 – 66%	**D**- → 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 must be followed up with an email. Oversleeping and "colds" are examples that are **not** valid reasons for an absence.

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 quizzes).

Note: class BEGINS at either 10:00 am (T6) or 11:00 am (T19). It is expected that you will be in your seat and ready to go at either 10:00 am (T6) or 11:00 am (T19).

Excessive "lateness" will not be tolerated. It is disruptive to both the instructor and the class.

CLASS CANCELATION: In the unlikely event that a class needs to be canceled by the instructor, you will be notified by the instructor via email as soon as possible on the day of the class cancelation.

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.

For the online homework: For most assignments, you will be given one week from the date assigned to complete your online assignment for full credit. Once due dates have passed, most assignments will remain open for one additional week. 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. This means for some sections you may not have a complete week to complete the assignment, or may not have the additional week to receive the ½ credit. All online assignments MUST be completed prior to taking the exam on that material. Watch your MyLab carefully. All assignments are due by 11:00 am on due dates.

For text homework: Keep a separate notebook for your text homework. It is expected homework form your text is completed, or at least reasonably attempted, by the class meeting after it was assigned. 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 one hour we meet in class. So, you should expect to spend ***at least* 6-9 hours per week** on this class, every week!

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 extreme situations 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 the next class meeting after the given 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 semester, only your top 10 scores will count toward your final grade.

EXAMS: You will have four in-class exams and one final exam. Exams are scheduled for the following dates:
Exam 1: **Monday 2/13/12**, **Exam 2: Wednesday 3/28/12**, **Exam 3: Friday 4/20/12**, **Exam 4: Friday 5/11/12**, **Final Exam: Wednesday 5/16/12 (2 hour final exam)**
This may 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)**.

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

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 Honor Council. 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 and some trigonometry.

COURSE OUTCOMES:

1. Factor an algebraic expression using a combination of greatest common factor, difference of two squares, sum or difference of two cubes, and/or trinomial factoring .
2. Use factoring procedures to solve equations and problems.
3. Solve compound linear inequalities of the form c <ax + b <d. Express answer algebraically, graphically, and using interval notation.
4. Isolate a particular variable in a literal equation.
5. Use quadratic formula to find exact values of a quadratic equation with irrational or imaginary solutions. Approximate the irrational solutions.
6. Solve basic exponential and logarithmic equations.
7. Evaluate basic logarithmic expressions, and convert between logarithmic and exponential form.
8. Solve an exponential equation that requires the use of logarithms.
9. Graph a quadratic function by finding the vertex, x- and y-intercepts.
10. Relate the discriminant in the quadratic formula to the graph of a parabola.
11. Graph a basic exponential or logarithmic function.
12. Know the graphical relationship between exponential and logarithmic functions.
13. Express the slope as a rate of change using appropriate units.
14. Write the equation of a linear function given data. Use functional notation in the answer.
15. Write the equation of an exponential function given data. Use functional notation in the answer.
16. Solve a 2 x 2 and 3 x 3 system of equations.
17. State the domain of linear, quadratic, exponential and logarithmic functions.
18. Evaluate functions using numerical and algebraic values.
19. Identify domain (inputs) and range (outputs) graphically for basic functions.
20. Interpret functional notation in a variety of application problems.

21. Determine if a relation is a function by looking at a graph, table, or equation.
22. Solve a rational equation and check for extraneous solutions.
23. Solve a radical equation that produces a second-degree equation. Check for extraneous solutions.
24. Know and apply the rules of integer and fractional exponents

25. Add, subtract, multiply, divide rational expressions. Reduce the answers.
26. Simplify a complex fraction.
27. Know the meaning of rational exponents and their relationship to radical form.

28. Simplify radical expressions with emphasis on cube roots and lower.
29. Rewrite radical expressions by rationalizing numerator or denominator.
30. Add, subtract, multiply, and divide radical expressions.
31. Solve application problems involving the Pythagorean Theorem.
32. Given a quadratic model, find and interpret the maximum or minimum values, and the intercepts.
33. Solve an application problem involving quadratic equations.
34. Solve an application problem that involves rational expressions.
35. Solve an application problem involving a given exponential or logarithmic model.
36. Solve applications involving linear systems.

37. Find the six trigonometric values of an acute angle
38. Solve triangles using right triangle trig, distinguish between the angle of depression and elevation.
39. Solve applied problems using right triangle trigonometry

ACCOMMODATIONS: Students with learning disabilities should contact the Learning Specialist, Chris Scarborough at 860-892-5751 or cscarborough@trcc.commnet.edu as soon as possible to ensure timely accommodations. Students with physical disabilities should contact Judy Hilburger at 860-383-5420 or via email at jhilburger@trcc.commnet.edu or Matt Liscum at 860-383-5420 or via email at mliscum@trcc.commnet.edu 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 will 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 immediately and you have up through February 1, 2012 to register for another section.

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!

TENTATIVE SCHEDULE **MAT K137 – SPRING 2012**

Week of:	Chapter(s):	Topics Covered:
1/20	1.6	Functions
1/23	Handouts	Trigonometry, **Quiz #1 – Friday 1/27**
1/30	2.1 – 2.3	Modeling with Linear Functions, **Quiz #2 – Friday 2/3**
2/6	3.2, 3.3	Systems of Linear Equations, Catch-up, **Quiz #3 – Friday 2/10**
2/13	4.1 - 4.3	**Exam #1 – Chapters 1, 2, 3 & Trig - Monday 2/13** Properties of Exponents, Rational Exponents, Graphing Exponential Functions
2/20	4.4	**No classes Monday 2/20 – President's Day** Finding Equations of Exponential Functions, **Quiz #4 – Wednesday 2/22** **No MAT 137 Friday 2/24 – Instructor out of town**
2/27	4.5, 5.2	**No MAT 137 Monday 2/27 – Instructor out of town** Exponential Functions, continued, Logarithmic Functions **Quiz #5 – Friday 3/2**
3/5	5.3, 5.4	Logarithmic Functions, continued **Quiz #6 – Wednesday 3/7** **No MAT 137 Friday 3/9 – Instructor out of town**
3/12	5.5, 5.6	**No MAT 137 Monday 3/12 – Instructor out of town** Logarithmic Functions, continued **Quiz #7 – Friday 3/16**
3/19		**No Classes 3/19 – 3/25 – Spring Break**
3/26	6.1, 6.2	Review **Exam #2 – Chapters 4 & 5 – Wednesday 3/28** Polynomial Functions
4/2	6.3 – 6.6	Factoring Polynomial, Using Factoring to Solve Polynomial Equations **, Quiz #8 – Wednesday 4/4** **No classes Friday 4/6 – Spring Recess**
4/9	7.1 , 7.2, 7.4, 7.5	Graphing Quadratic Functions, Solving Quadratic Functions **Quiz #9 – Friday 4/13**
4/16	7.7 ,	Quadratic Models, Catch-up **Quiz #10 – Wednesday 4/18** **Exam #3 – Chapters 6 & 7 – Friday 4/20**

4/23	8.1 – 8.4	Rational Functions
4/30	8.5, 8.6, 9.1	Rational Functions, continued, **Quiz # 11 – Friday 5/4**
5/7	9.2, 9.5	Radical Functions, Catch-up, **Quiz #12 – Wednesday 5/9** **Exam #4 – Chapters 8 & 9 – Friday 5/11**
5/14		Review **Final Exam – Wednesday 5/16** ****Note: You will need 2 hours to complete your final exam, please plan accordingly. You final exam will be administered from 9 am to 1 pm. You must take your final exam in one sitting and will have two hours to complete the exam.**

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