Math 137 Intermediate Algebra, 3 Credits Instructor: Joan M. Casey (860)-501-1288, jcasey@trcc.commet.edu Prerequisite: Acceptable placement score or Math 095 SPRING 2011, Tues/Thurs 11am – 12:15, Room E221

Required Text and Materials:

Intermediate Algebra, Functions & Authentic Applications, Fourth Edition, Jay Lehmann, Prentice Hall. TI 83 or TI 84 Graphing Calculator Notebook (Bring to every class)

Grading Policy:

There will be 4 tests, each worth 20% of your grade. There will be 4 quizzes, the average of the quizzes will be worth 20% of your grade A letter grade will be given at the end of the semester; grade equivalents are as follows:

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

Statement on Disabilities: If you are a student with a disability and believe you will need accommodations for this course, 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.

College Withdrawal Policy: Students may withdraw, in writing at the Registrar's Office, for any reason until the end of the 10th week of classes (May 9). Last day to ADD/DROP with partial tuition refund: Feb. 2nd.

OTHER:

Attendance at EVERY class is expected.

If you will be absent on the day of a scheduled test, **<u>please notify me PRIOR to the test</u>** so that arrangements can be made. Tests that are missed, without my prior knowledge, cannot be made up.

NO CELLPHONES or TEXTING during class.

Students are alerted to any **school closings & delays** through the Three Rivers web site: <u>www.trcc.commnet.edu</u>.

TASC is the college's **free tutoring** and academic success center. Meeting with me is another option. I will be available 20 minutes prior to and 20 minutes beyond each regularly scheduled class.

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. Solve applied problems using right triangle trigonometry