SYLLABUS

Three Rivers Community College

MAT K137 – Intermediate Algebra CRN 12383

Spring 2013

INSTRUCTOR:

Andrew Smith

Office Hours: By Appointment Only

Email: asmith@trcc.commnet.edu

Home Phone: 860-367-0713

PREREQUISITES: Math 095 with a grade of C or better OR an acceptable placement score.

TEXT: Elementary and Intermediate Algebra: Graphs and Models 4th edition, by Bittenger, Ellenbogan & Johnson.

DAY/TIME/ROOM: T/R 1 – 2:15 RM E202

COURSE DESCRIPTION: This continues the development of algebraic skills and concepts. It also touches lightly on right triangle trigonometry. The topics include linear equations, functions and graphs, applications of systems of equations, inequalities, rational expressions and equations, operations on radicals and radical equations, rational exponents, quadratic equations, exponential and logarithmic functions.

ATTENDANCE/HOMEWORK: It is strongly recommended that you attend every class. Arrive on time and be prepared to take a quiz at any time. Homework will be assigned on a daily basis. All homework Assignments must be completed to insure success in this course. Students are expected to have a two-section notebook. One section for class notes, the other for homework. This notebook should be available to the instructor at each class. If you miss class, you are still responsible for the work. CELL PHONES MUST BE TURNED OFF DURING CLASS.

WITHDRAWAL POLICY: Students may withdraw, in writing, at the Registrar's Office for any reason through May 13th, 2013.

GRADING/EXAM POLICY: There will be at least **6-7 quizzzes** during class time, and at least **4 class long** chapter test**, and a** CUMMULATIVE FINAL EXAM.

Grades will be determined according to the following:

Quizzes:	25%
Tests:	45%
Homework/Attendance:	**5%**
Final Exam:	**25%**

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%

NO EXTRA CREDIT IS AVAILABLE IN THIS COURSE.

MISSED EXAMS/QUIZZES: Make-ups for missed exams will be given only in extreme circumstances, and if **PRIOR** arrangements are made. **If you miss an exam, you will receive a grade of 0 (zero).** If you miss a quiz, you will receive a grade of 0(zero).

The moral to the above is: **DON'T MISS AN EXAM OR A QUIZ!**

Cell Phones:
Cell phones and beepers must be turned off during class and may not be used as a calculator. Students who ignore this policy will be asked to leave class. If there is an extenuating situation, the student must contact the instructor prior to class.

Disabilities Statement: If you have a visible or hidden disability that the instructor should be aware of please see me as soon as possible. Please register with Chris Scarborough if you have not done so.

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.

GRAPHING CALCULATOR: A TI – 83 is recommended. But any graphing calculator is fine.

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

Math 137 Intermediate Algebra

Chapter	Section	Assignment
6	6.5	470/ 3-42 mult of 3
	6.6	475/ 6-72 mult of 3
	6.7	487/ 5,10,15,20,25
		Trigonometry Handout
7	7.1	511/ 5-75 mult of 5
	7.2	518/ 5-70 mult of 5
	7.3	526/ 5-60 mult of 5
	7.4	534/ 10-70 mult of 10
	7.5	545/ 5-30 mult of 5
	7.6	553/ 5-50 mult of 5
	7.8	558/ 15-35 mult o
	Test 1	
9	9.1	654/ 10,15,20.25
	9.2	660/ 3.6.9.12
10	10.1	705/ 9-99 mult of 3
	10.2	714/ 5-110 mult of 5
	10.3	721/ 10-75, mult of 5
	10.4	728/ 10-70 mult of 5
	10.5	735/ 10-90 mult of 5
	10.6	744/ 9-54 mult of 9
	10.8	763/ 9-90 mult of 9
	Test 2	
11	11.1	783/ 5-40 mult of 5
	11.2	791/ 10-50 mult of 5
	11.3	795/ 5-45 mult of 5

	11.4	801/ 15-30 mult of 3
	11.5	819/ 5-60 mult of 5
	11.6	819/ 5-60 mult of 5
	11.7	830/ 10, 20-45 mult of 5
	11.8	840/ 9,11,18,21

Test 3

12	12.2	873/ 5-40 mult of 5
	12.3	884/ 5-110 mult of 5
	12.4	891/ 3-54 mult of 3
	12.5	901/ 3-69 mult of 3
	12.6	907/ 5-70 mult of 5
	12.7	920/ 5,10,21,24,30

Test 4