Syllabus

Math 137 Intermediate Algebra
Three Rivers Community College
Norwich, Connecticut 06360

Marianne Spader
mspader@trcc.commnet.edu

Course Description

This course continues the development of algebraic skills and concepts. The topics include: linear equations, functions, applications of systems of equations, inequalities, rational expressions and equations, operations on radicals and rational exponents, quadratic equations, exponential and logarithmic functions and basic right triangle trigonometry.

Credit : 3 credit hours

Prerequisite: Mat 095 or acceptable placement score

Required Text: Intermediate Algebra 4th edition by Jay Lehmann. A TI- 84 calculator is also required.

Grading Policy

A student will receive one of the following grades: A, A-, B +,B, B-, C+,C,C-,D+,D,D-, I, W,P, or Audit.

Determination of your grade will be based on the following.

Tests and Quizzes - There will be four exams during the semester. They will be announced at least a week prior to taking them. Quizzes will be taken the first 15 minutes of class and cannot be made up. These will be unannounced. All of your quizzes will be averaged and counted as one test grade. Your grade will be determined by taking the mean of your four semester tests and quiz average.

Homework - Homework will be assigned after every class. Homework is given in order to reinforce the techniques and concepts taught during class. Assignments should be completed prior to the next class meeting. Any questions you have on homework should be asked at the beginning of the next class. Students will be required to have a two-section notebook. One section is dedicated to class notes while the other section is dedicated to homework. The students' notebook should be available to the instructor at each class. Cell phones may not be used as a calculator and must be turned off during class

Attendance- Mathematics based courses are sequential. It is necessary to comprehend each topic or step before proceeding to the next one. It is therefore necessary to attend all classes. Attendance will be taken. Occasional absences are sometimes unavoidable. If you miss a class you are responsible for the material. Make arrangements to get the notes from a classmate. **If you must miss class the day of an exam, you must e-mail me prior to the exam to arrange a time for a make-up. Failure to do so will result in a grade of zero for that exam.** Exams will be made up at the end of the semester or the hour before the next class meeting.

Grade Equivalents

A 93 - 100	C+ 77 - 79	F 59 or below
A- 90 - 92	C 73 - 76	
	C- 70 - 72	
B+ 87 - 89	D+ 67 - 69	
B 83 - 86	D 63 - 66	
B- 80 - 82	D- 60 - 62	

College Withdrawal Policy

A verbal "drop or withdrawal" from the course will be accepted through the 10th week of classes in accordance with the designated withdrawal deadlines. Students need to provide the following information: full name, address, date of birth, student identification number, a social security number, course reference number(CRN) and descriptor/subject and instructor's name and if VA/FA benefits. Verbal drops/withdrawals are only processed through the Registrar's Office. Students who do not withdraw but stop attending will be assigned an "F".

Disabilities Statement

If you are a student with a disability and believe you will need accommodations for the class it is your responsibility to contact the disabilities counseling services. To avoid any delay in the receipt of accommodations, you should contact the counselor as soon as possible. I cannot provide any accommodations based upon disability until I have received an accommodation letter from the disabilities counselor.

Trigonometry Section

Download the trigonometry handout at the TRCC web site. Click academics, scroll down click Mathematics department and under "News" you will find a link to the PDF.

Tentative Course Content

1.6
2.1 - 2.3
Trig
3.2-3.3
4.1-4.5
5.2-5.6
6.1-6.6
7.1-7.3,7.5-7.7
8.1-8.3,8.5,8.6
9.1,9.2,9.5

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