SYLLABUS

MATH -137
INTERMEDIATE ALGEBRA
3 credits

Instructor: Elisa Santee   (860)455-0739

COURSE DESCRIPTION:
This course continues the development of algebraic skills and concepts. The topics includes 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. Prerequisite: Acceptable placement score or Math 095.

RATIONALE:
A basic understanding of algebra is necessary for many fields of study including business, science, economics and mathematics. Algebraic skills are an essential tool needed to comprehend future mathematics courses such as Statistics, Calculus and/or College Algebra and Trigonometry. Since mathematical problems are not limited to mathematics courses, the skills of Intermediate Algebra improve the student's ability to comprehend his/her environment as well as other college courses.

REQUIRED TEXT and MATERIALS:
.Intermediate Algebra Functions & Authentic Applications,(4th edition), Jay Lehmann
Graphing Calculator
Notebook for notes/quizzes
Writing implement

GRADING POLICY:

There will be exams and quizzes. You are REQUIRED to take ALL EXAMS. There are no MAKE-UPS on exams. If you miss an exam, you will receive a grade of ZERO. If you cannot be in class the day of the exam, you must call me prior to class time, so accommodations can be made for a make-up exam.

There will be 6-7 take home quizzes. Your highest 4 scores will be averaged to make one test grade. Quizzes are an indicator for both the student and me, to see if the material is being learned. A poor grade on a quiz should indicate to you that further study is required before the next exam.

Your course grade will be the arithmetic average of your exam grades and averaged quiz grades.

GRADE EQUIVALENTS;

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

DISABILITIES STATEMENT;

If you have a hidden or visible disability which may require classroom or test-taking modifications, please see me as soon as possible. If you have not already done so please be sure to register with Chris Scarborough who is coordinating services to students with disabilities.

MAT137 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

CLASS CANCELLATION POLICY;

If the **MANSFIELD SCHOOLS** are closed, class will be cancelled. If there is a 90 minute delay for the Mansfield Schools, we **WILL** have class.

Elisa Santee
Math 075 and Math 137

My email: elisafoxfire@msn.com
My home phone: 860-455-0739 leave a message

INFORMATION SHEET

I understand the policy of makeup exams as stated in the Syllabus for this course. I understand that I must make contact with my instructor PRIOR to the exam period in order to make arrangements for the makeup exam. Failure to do so will result in a grade of zero on that exam.

Signed_____

Date_____Course_____

Name:
Address:

Phone Number: ` Email:

Last Mathematics Course:
When:

Program of Study:

Any other information that you wish to tell me: