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MASTER SYLLABUS

DVMA 0092 DEVELOPMENTAL MATHEMATICS

COURSE DESCRIPTION:
This course is designed for students who need intermediate algebraic concepts. The topics covered in this course are Linear Equations with Two Variables, System of Linear Equations, Inequalities, Radical Expressions and Quadratic Equations.

PREREQUISITES: A satisfactory grade in DVMA 0091 or ACT, COMPASS, or ASSET Placement Test.

COURSE OBJECTIVES:
The purpose of this course is to provide instruction that will enable students to acquire a better understanding of intermediate algebraic concepts, thus providing a foundation for the next higher-level mathematics course.

SPECIFIC COMPETENCIES:
Upon successful completion of this course, the student will be able to:

1. Factor a monomial from a polynomial
2. Factor a trinomial of the form $x^2 + bx + c$.
3. Factor a trinomial of the form $ax^2 + bx + c$ by using trial factors.
4. Factor a trinomial of the form $ax^2 + bx + c$ by using grouping.
5. Factor the difference of two square and perfect-square trinomials.
6. Solve equations by factoring.
7. Simplify, multiply, and divide rational expressions.
8. Find the least common multiple (LCM) of two or more polynomials.
9. Express two fractions in terms of the LCM of their denominators.
10. Add or subtract rational expressions with like and unlike denominators.
11. Simplify a complex fraction.
   MIDPOINT
12. Solve an equation containing rational expressions.
13. Solve a proportion
14. Solve a literal equation for one of the variables.
15. Graph points in a rectangular coordinate system.
16. Graph a linear equation in two variables.
17. Find the x and y intercepts of a straight line.
18. Find the slope of a straight line.
19. Find the equation of a line given the slope and one point.
20. Find the equation of a line given two points on the line.
21. Solve linear equations.
22. Simplify numerical radical expressions.
23. Simplify variable radical expressions.
24. Add, subtract, multiply, and divide radical expressions
25. Solve an equation containing a radical expression.
26. Solve a quadratic equation by factoring.
27. Solve quadratic equations by taking square roots.
28. Solve quadratic equations by completing the square.
29. Solve quadratic equations by using the quadratic formula.