Alexandria Technical and Community College

MATH 0431: Intermediate Algebra

A. COURSE DESCRIPTION

Credits: 3
Lecture Hours/Week: 3
Lab Hours/Week: **
OJT Hours/Week: **

Prerequisites:
This course requires any of these six prerequisites
  MATH 0429 - Beginning Algebra (Minimum grade: 2.0 GPA Equivalent and Number of Years Valid: 5)
  A score of 20 on test ACT Math
  A score of 52 on test Accuplacer Elementary Algebra
  A score of 2 on test Intermediate Algebra
  A score of 250 on test Accuplacer NG Quantitative Reasoning
  A score of 237 on test Accuplacer NG Advanced Algebra Functions

Corequisites: None
MnTC Goals: None

This course is for learners who want or need preparation in algebraic techniques that will enable them to enroll in a college level math course. The main goal of the course is to provide training and practice in intermediate algebraic techniques, such as working with rational expressions, solving systems of equations, graphing equations, and solving quadratic equations. The learner must pass this course with a minimum grade of "C" to advance to college level courses.

B. COURSE EFFECTIVE DATES: 05/18/2009 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Simplifying and solving rational expressions.
2. Factoring trinomials by removing a common factor or grouping.
3. Identify and factor trinomials using special cases for factoring.
4. Solving quadratic equations by factoring.
5. Simplify rational expressions by adding, subtracting, multiplying, and dividing.
6. Simplify and solve complex rational expressions.
7. Solve applied problems using ratios, proportions.
8. Simplifying radical expressions.
9. Adding, Subtracting, Multiplying, and dividing radicals.
10. Introduce the complex number systems.
11. Application problems using direct and inverse variation.
12. Solving quadratic functions using various methods.
13. Introduction of functions and their inverses.
14. Applying basic algebraic operations on functions.

D. LEARNING OUTCOMES (General)

1. The learner will solve equations or systems of equations involving rational expressions.
2. The learner will utilize graphing techniques to write, graph, and solve equations.
3. The learner will solve quadratic equations.
E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
   None

F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted