Math 126E College Algebra Enhanced

Credit Hours: 0

Scheduled hours per week

Lecture: 0
Lab: 2
Other: 0

Catalog Course Description: This co-requisite lab is designed to establish the necessary background knowledge to be successful in College Algebra.

Pre-requisites: None

Corequisites: Math 126 or Math 121 (Elementary Education majors only)

Course learning Outcomes:

A. Students will demonstrate ability to solve equations which includes linear, quadratic, absolute value, rational, radical, and applications.
B. Students will demonstrate ability to solve inequalities which includes linear, quadratic, compound, and absolute value, and applications.
C. Students will demonstrate the ability to recognize a polynomial, determine its degree and know how to add, subtract, multiply, and divide them.
D. Students will demonstrate ability to factor polynomials.
E. Students will demonstrate ability to simplify, add, subtract, multiply, and divide rational expressions.
F. Students will demonstrate knowledge of linear equations of two variables which includes graphing, equation of lines and 2x2 and 3x3 systems of equations, and applications.
G. Students will demonstrate knowledge of basic concepts of functions.
H. Students will demonstrate knowledge of radicals which includes laws of exponents, simplifying, rationalizing, and performing operations.
I. Students will demonstrate ability to perform operations with complex numbers.

Topics to be studied:

Polynomial operations
Factoring polynomials: GCF, trinomials, difference of squares and cubes, sum of cubes, grouping
Solving equations: linear, quadratic, absolute value, rational, radical
Solving inequalities: linear, nonlinear, compound, absolute value
Perform operations with rational and radical expressions, and complex numbers
Functions
Linear equations of two variables
2x2 and 3x3 systems of linear equations

Relationship of course to program outcomes:

(What program outcomes are being met by this course?
For general education courses, a listing of the general education competencies that are met.)

Relationship of Course to Mathematics (MATH) Student Learning Outcomes:	
Demonstrate understanding of the language of mathematics, by their use of symbols, definitions, word phrases, and representations.	x
Display proficiency in mathematical computations.	x
Implement mathematical techniques to solve applied problems.	x
Employ appropriate technology to demonstrate knowledge of mathematical concepts.	x
Exhibit mastery of core course competencies.	x
10/20/2017	

Relationship of Course to General Education Learning Outcomes:	
Composition and Rhetoric Students illustrate a fundamental understanding of the best practices of communicating in English and meet the writing standards of their college or program-based communication requirements.	
Science & Technology Students successfully apply systematic methods of analysis to the natural and physical world, understand scientific knowledge as empirical, and refer to data as a basis for conclusions.	
Mathematics & Quantitative Skills Students effectively use quantitative techniques and the practical application of numerical, symbolic, or spatial concepts.	x
Society, Diversity, & Connections Students demonstrate understanding of and a logical ability to successfully analyze human behavior, societal and political organization, or communication.	
Human Inquiry & the Past Students interpret historical events or philosophical perspectives by identifying patterns, applying analytical reasoning, employing methods of critical inquiry, or expanding problem-solving skills.	
The Arts & Creativity Students successfully articulate and apply methods and principles of critical and creative inquiry to the production or analysis of works of art.	
5/3/2016	

Special requirements of the course: None

Additional information: None

Prepared by: Andrew Carpenter

Date: 10/20/2017