

Standard Institutionally Developed College: N/A

EDGE Compatible: No

Pre-requisites

Program Admission
MATH 0097 - Math III (201003)

Co-requisites

Course Description

Emphasizes basic algebra skills. Topics include introduction to real numbers and algebraic expressions, solving linear equations, graphs of linear equations, polynomial operations, and polynomial factoring.

Course Length

	Minutes	Contact Unit
Lecture:	2250	
Lab 2:	0	
Lab 3:	0	
Practicum/Internship:	0	
Clinical:	0	
Total:	2250	3

Semester Credit Hours: 3

Competencies

Order	Description	Lecture	Lab2	Lab3	Practicum/Internship	Clinical	Total Minutes	Semester Credit Hrs
1	Introduction to Real Numbers and Algebraic Expressions	450	0	0	0	0	450	0
2	Solving Linear Equations	450	0	0	0	0	450	0
3	Graphs of Linear Equations	450	0	0	0	0	450	0
4	Polynomial Operations	450	0	0	0	0	450	0
5	Polynomial Factoring	450	0	0	0	0	450	0
Totals for Course MATH 0098 - Elementary Algebra (version 201003):		2250	0	0	0	0	2250	3

Learning Outcomes

Introduction to Real Numbers and Algebraic Expressions

Order	Description	Learning Domain	Level of Learning
1	Add real numbers.	Cognitive	Knowledge
2	Subtract real numbers.	Cognitive	Knowledge
3	Multiply real numbers.	Cognitive	Knowledge
4	Divide real numbers.	Cognitive	Knowledge
5	Identify and use the properties of real numbers.	Cognitive	Application
6	Simplify algebraic expressions using the order of operations.	Cognitive	Application

Solving Linear Equations

Order	Description	Learning Domain	Level of Learning
1	Solve linear equations using the addition principle.	Cognitive	Application
2	Solve linear equations using the multiplication principle.	Cognitive	Application
3	Solve linear equations using the addition and multiplication principles together.	Cognitive	Application
4	Solve formulas for an indicated variable.	Cognitive	Application
5	Solve applications involving percents.	Cognitive	Analysis
6	Solve application problems.	Cognitive	Analysis

Graphs of Linear Equations

Order	Description	Learning Domain	Level of Learning
1	Graph linear equations.	Cognitive	Application
2	Graph linear equations using intercepts.	Cognitive	Application
3	Find the slope of a line given two points, from an equation, and in an applied problem.	Cognitive	Application

Polynomial Operations

Order	Description	Learning Domain	Level of Learning
1	Use the rules for exponents to simplify expressions.	Cognitive	Application
2	Solve applied problems using scientific notation.	Cognitive	Application
3	Add and subtract polynomials.	Cognitive	Application
4	Multiply and divide polynomials.	Cognitive	Application
5	Identify polynomials that are special products.	Cognitive	Knowledge
6	Perform operations with polynomials in several variables.	Cognitive	Application

Polynomial Factoring

Order	Description	Learning Domain	Level of Learning
1	Factor monomials, binomials, and trinomials.	Cognitive	Application
2	Factor trinomial squares and differences of squares.	Cognitive	Application

Order	Description	Learning Domain	Level of Learning
3	Solve quadratic equations by factoring.	Cognitive	Application
4	Solve applications involving quadratic equations.	Cognitive	Analysis

References

Order	Reference Type	Description
1	Book with Author(s) Listed	Bittinger, M. & Beecher, J.. (2008). Developmental Mathematics. (7th). New York, NY: Addison Wesley.
2	Book with Author(s) Listed	Aufmann, R., Barker, V. & Lockwood, J.. (2004). Algebra: Introductory and Intermediate. (3rd). Boston, MA: Houghton Mifflin.
3	Book with Author(s) Listed	Cleaves, C. & Hobbs, M.. (2004). College Mathematics for Technology. (6th). Upper Saddle River, NJ: Pearson/Prentice Hall.
4	Book with Author(s) Listed	Lial, M., Hornsby, J. & McGinnis, T.. (2004). Beginning and Intermediate Algebra. (3rd). New York, NY: Addison Wesley.
5	Computer Software	Pearson Education. (2009). MyMathLab [Computer Software]. Boston, MA: Pearson Education www.mymathlab.com
6	Book with Author(s) Listed	Martin-Gay, K. Elayn. (2007). Algebra: A combined approach. (3rd). Englewood Cliffs, NJ: Prentice Hall.
7	Computer Software	Pearson Education. (2009). MyMathLab [Computer Software]. Boston, MA: Pearson Education www.mymathlab.com