

DESCRIPTOR

Discipline: Elementary Mathematics	Proposed Sub-discipline (if applicable):
General Course Title: Elementary Mathematics	Min. Units 5
<p>General Course Description: This course is a review of basic mathematics, operations on real numbers, and algebraic expressions. It includes traditional arithmetic and pre-algebra for students needing to develop or improve computational and quantitative reasoning skills, and an introduction to elementary topics in algebra. This course is an option for those students who choose intensive instruction in elementary mathematics.</p>	
Proposed Number:	Proposed Suffix (if applicable):
Any rationale or comment	
Required Prerequisites:	
Required Co- Requisites:	
Advisories/Recommended Preparation ¹ :	
<p>Course Content: The following topics should be covered with a focus on use in elementary mathematics and a first introduction to elementary algebra:</p> <ol style="list-style-type: none"> 1. Operations with real numbers <ol style="list-style-type: none"> a. The real number line b. Mathematical operations and symbols: \bullet, $<$, $>$, \leq, \geq, $=$, \neq c. Real number properties and absolute value 2. Coordinate Axis – Rectangular Coordinate System 3. Fractions <ol style="list-style-type: none"> a. Operations b. Lowest Common Denominator 4. Algebraic expressions and equations <ol style="list-style-type: none"> a. Order of operations b. Linear and nonlinear c. Integer exponents d. Square root, Cube root 5. Linear equations in one and two variables <ol style="list-style-type: none"> a. Solve b. Graph 6. Linear inequalities in one variable <ol style="list-style-type: none"> a. Solve b. Graph 7. Ratio and proportion 8. Percents 9. Geometry <ol style="list-style-type: none"> a. Properties of rectangles, squares, triangles, and circles b. Perimeter/circumference of each of these figures c. Area of each of these figures 10. Problem solving strategies <ol style="list-style-type: none"> a. Using formulas b. Translate English phrases and sentences into mathematical notation 	

¹ Advisories or recommended preparation will not require validation but are recommendations to be considered by the student prior to enrolling.

11. English and metric measurements and conversions

Optional Additional Topics:

1. Introduction to Quadratic Expressions and Equations
 - a. Factoring
 - b. Solve
 - c. Square Roots
 - d. Quadratic Formula
 - e. Graph Quadratic Equation

Laboratory Activities: (if applicable)

Course Objectives: *At the conclusion of this course, the student should be able to:*

1. Apply the four basic operations of integers and rational numbers to solve problems, including applications.
2. Evaluate simple algebraic expressions including the use of order of operations.
3. Solve linear and absolute value equations.
4. Identify, describe, and simplify ratios and rates.
5. Set up a proportion and/or a percent equation to solve problems, including applications.
6. Use geometric formulas to solve problems involving angles, perimeter, circumference, and area.
7. Graph linear and absolute value equations.

Methods of Evaluation:

Sample Textbooks, Manuals, or Other Support Materials (do not include editions or publications dates)

FDRG Lead Signature:

Date:

[For Office Use Only]

Internal Tracking Number