

DESCRIPTOR

Discipline: Mathematics – Basic Skills	Proposed Sub-discipline (if applicable):
General Course Title: Fundamentals of Algebra for Statistics or Liberal Arts	Min. Units 5
<p>General Course Description:</p> <p>This course consists of elements of beginning and intermediate algebra specifically designed for statistics, liberal arts mathematics, and other non-math-intensive fields and may be accompanied by co-requisite or prerequisite support. Topics include polynomial, rational, radical, and exponential—expressions, equations, functions, and graphs; polynomial, rational, and radical inequalities; systems of equations; algebra of functions; sequences and series; data sets, and modeling.</p>	
Proposed Number: Math BS 81X	Proposed Suffix (if applicable):
<p>Any rationale or comment</p> <p>This course description includes baseline topics of an intermediate algebra course for students not pursuing majors in STEM or some business fields. In addition, prerequisite and/or foundational skills are implicit in many topics, and may not be explicitly stated in the Course Content. For example, operations of real numbers is a prerequisite to topics in this course; domain and range are foundational to inverse functions. It is expected that colleges may include additional topics or elements as appropriate to local curricular programs. As additional topics are included, the number of units should increase appropriately. Some colleges may choose to offer a co-requisite course to support students requiring additional instruction and support. This course is not intended to be a required element of a college’s curricular offering, rather an option for colleges choosing to streamline curriculum efforts.</p>	
Required Prerequisites:	
Required Co- Requisites:	
<p>Advisories/Recommended Preparation¹:</p> <p>For students without a strong background in elementary mathematics, it is recommended that they take Math xxx: Elementary Mathematics. For students without a strong background in elementary algebra, but with strong elementary mathematics skills, it is recommended that they enroll in a co-requisite support course.</p>	
<p>Course Content:</p> <p>The following topics should be covered with a focus on use in elementary statistics and liberal arts mathematics:</p> <ol style="list-style-type: none"> 1. Algebraic Expressions 2. Rational Exponents 3. Polynomials – Monomial, Binomial, Trinomial <ol style="list-style-type: none"> a. Introduction to Factoring b. Solve Equations c. Graphing 4. Rational Expressions and Equations <ol style="list-style-type: none"> a. Solve Equations b. Graphing 5. Inequalities – Linear, Absolute Value, Quadratic, Rational <ol style="list-style-type: none"> a. Solve b. Graphing 	

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

- 6. Radical Expressions and Equations – Square Root, Cube Root
- 7. Functions – Polynomial, Rational, Radical, Exponential, Logarithmic
 - a. Function Notation
 - b. Algebra of functions and composition of functions
 - c. Graphing
 - d. Inverse Functions
- 8. Data Sets
 - a. Venn Diagrams
 - b. Graphing
 - c. Correlation vs. Causation
- 9. Modeling and Applications

Optional Topics:

- 1. Quadratic Formula
- 2. Properties of Logarithms
- 3. Sequences and Series: Summation Notation
- 4. Binomial Theorem
- 5. Basic Ideas of Logic
- 6. Geometry

Laboratory Activities: (if applicable)

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

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