MATH 80X -DESCRIPTOR

Discipline: Mathematics (MATH-BS)	Sub-discipline:	
General Course Title: Intermediate Algebra		Min. Units 4 semester, 6 quarter
General Course Description: Topics include algebra of functions, quadratic and rational equations and inequalities, factoring polynomials, radical equations and expressions, logarithms, exponential equations, systems of equations, complex numbers, nonlinear relations, and modeling.		
Number: 80	Suffix: X	
Any rationale or comment		
Required Prerequisites: Elementary/Introductory/Beginning Algebra C-ID MATH-BS 70		
Advisories/Recommended Preparation[1]		

Course Content:
1. Polynomials
    a. Factoring including sums and differences of cubes and using substitution
    b. Solve equations by factoring
2. Rational expressions and equations
3. Linear inequalities and literal equations
4. Absolute value equations and inequalities
5. Radical expressions and equations including square and cube roots
    a. Rational exponents
    b. Complex numbers
6. Relations and functions
    a. Domain and range
    b. Linear and nonlinear
    c. Function notation
    d. Algebra of functions and composition of functions
7. Quadratic equations and functions and their graphs
    a. Completing the square
    b. Quadratic formula including real and non-real solutions
8. Graphs of nonlinear relations including parabolas and circles
9. Exponential and logarithmic functions
    a. Inverse functions
    b. Properties of logarithms
    c. Solving exponential and logarithmic equations
10. Systems of equations
11. Modeling with linear and nonlinear functions
    a. Must include one of the following: growth and decay, geometry, optimization, and/or uniform motion.

Laboratory Activities: (if applicable)

Course Objectives: *Upon successful completion of the course, students will be able to:* :
1. Solve polynomial, rational, absolute value, radical, literal, exponential, and logarithmic equations and systems of equations;
2. Factor polynomials;
3. Solve linear and absolute value inequalities;
4. Graph nonlinear relations and functions including parabolas and circles;
5. Use the properties of radicals, complex numbers, exponents and logarithms;
6. Recognize and determine the differences between functions;
7. Apply basic operations on functions and find inverse functions; and
8. Solve at least one of the following mathematical models: growth and decay, geometry,

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

optimization, and/or uniform motion.	
Methods of Evaluation: Tests, examinations, homework or projects where students demonstrate their mastery of the learning objectives and their ability to devise, organize and present complete solutions to problems.	
Sample Textbooks, Manuals, or Other Support Materials A college level text and/or online mathematical resources supporting the learning objectives of this course.	
FDRG Lead Signature:	Date: 2-29-16
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