



PLANNED COURSE STATEMENT

Course Title: Common Core III	Grade Level(s): 9-12
Length of Course: 2 Semesters	Credit Area: Math
Prerequisite: Common Core II	Amount of Credit: 1.0 (0.5/trimester)
Adopted/Supplemental Materials: McDougal Littell Algebra 2 2004	
Dual Credit Articulation:	

COURSE DESCRIPTION:

Students will review and increase their depth of understanding of linear, quadratic, rational, polynomial, exponential, and logarithmic. Students will be introduced to complex numbers as it pertains to quadratics and solve equations with complex solutions.

This course is in alignment with RCC (Rogue Community College) MATH 65 & 95. The RCC Math 65 test will be administered at the end of semester 1 and the Math 95 at the end of semester 2. MATH 65& 95 are not transferable to any other Community College or University.

COURSE GOALS:

Basics of Functions

- Introduction to Functions
- Graphs of Functions
- The Algebra of Functions
- Composite and Inverse Functions

Radicals, Radical Functions, and Rational Exponents

- Radical Expressions and Functions
- Rational Exponents
- Multiplying and Simplifying Radical Expressions
- Adding, Subtracting, and Dividing Radical Expressions
- Multiplying with More Than One Term and Rationalizing Denominators
- Radical Equations
- Complex Numbers

Quadratic Equations and Functions

- The Square Root Property and Completing the Square
- Distance and Midpoint Formulas
- The Quadratic Formula
- Quadratic Functions and Their Graphs with curve fitting

Exponential and Logarithmic Functions

- Exponential Functions
- Logarithmic Functions
- Properties of Logarithms
- Exponential and Logarithmic Equations
- Modeling Data - Exponential Growth and Decay with curve fitting

Exponents and Polynomials

- Adding and Subtracting Polynomials

Multiplying Polynomials
Special Products
Polynomials in Several Variables
Dividing Polynomials
Long Division of Polynomials and Synthetic Division
Negative Exponents and Scientific Notation

Factoring Polynomials

The Greatest Common Factor and Factoring By Grouping
Factoring Trinomials Whose Leading Coefficient is 1
Factoring Trinomials Whose Leading Coefficient is not 1
Factoring Special Forms
A General Factoring Strategy
Solving Quadratic Equations by Factoring

Rational Expressions

Rational Expressions and their Simplifications
Multiplying and Dividing Rational Expressions
Adding and Subtracting Rational Expressions with the Same Denominator
Adding and Subtracting Rational Expressions with Different Denominators
Complex Rational Expressions
Solving Rational Equations
Applications Using Rational Equations and Proportions
Modeling Using Variation

Inequalities and Problem Solving

Reviewing Linear Inequalities and Using Inequalities in Business Applications
Compound Inequalities
Linear Inequalities in Two Variables

ASSESSMENT STRATEGIES:

Daily work, starter and exit activities, participation, written exams, performance tasks, oral and written student presentations on specific concepts and processes, and a notebook including daily notes.

ACCOMMODATIONS AND MODIFICATIONS:

Any student who feels the course is moving too slowly and demonstrates mastery of the subject matter by consistently exceeding expectations for regular assignments is encouraged to meet with the teacher for more rigorous assignments and projects. More rigorous work will include alternate assignments and projects, not additional assignments. Work will be graded using the same standards for work completed by other students in the class. Conversely, a student with an IEP who needs more time to complete the work may have assignments modified to meet his/her needs.

CAREER RELATED LEARNING STANDARDS:

Students will demonstrate appropriate workplace behaviors (e.g. maintain regular attendance and be on time), apply decision-making and problem-solving techniques, demonstrate effective teamwork, apply the principles of effective communication to give and receive information, acquire, use, and transfer information, assess the relationship of educational achievement to career goals, research and analyze career options, assess characteristics related to personal, educational, and career goals, and demonstrate academic knowledge and technical skills required for successful employment.