MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE
COURSE OUTLINE

DEPT. MATH   **COURSE NUMBER: 0111**

NUMBER OF CREDITS: 2   **Lecture: 2 Lab: 0   OJT: 0**

Course Title:
Co-requisite with College Algebra

Catalog Description:
Co-requisite with College Algebra Supports students who qualify with additional review, just-in-time learning, deeper conceptual development, repetition over time, and learning skills and habits required to be successful with the corresponding college level MATH 1111 College Algebra Math course taken concurrently.

Prerequisites or Necessary Entry Skills/Knowledge:
ACT Math score of 19 or placement by multiple measures.

FULFILLS MN TRANSFER CURRICULUM AREA(S) *(Leave blank if not applicable)*

☐Goal 1: Communication: By meeting the following competencies:

☐Goal 2: Critical Thinking: By meeting the following competencies:

☐Goal 3: Natural Sciences: By meeting the following competencies:

☐Goal 4: Mathematics/Logical Reasoning: By meeting the following competencies:

☐Goal 5: History and the Social and Behavioral Sciences: By meeting the following competencies:

☐Goal 6: The Humanities and Fine Arts: By meeting the following competencies:

☐Goal 7: Human Diversity: By meeting the following competencies:

☐Goal 8: Global Perspective: By meeting the following competencies:

☐Goal 9: Ethical and Civic Responsibility: By meeting the following competencies:

☐Goal 10: People and the Environment: By meeting the following competencies:

Topics to be Covered
Growth Mindset, Study Skills and Habits
Introduction to Functions and Graphs
Linear Functions and Equations and Inequalities
Quadratic Functions and Equations
Other Non-linear Functions and Equations
Inverses, Exponential and Logarithmic Functions and Equations
Systems of Equations and Inequalities and Matrices
Sequences and Series

Student Learning Outcomes

Process Standards

Solve authentic problems by applying two or more mathematical strategies or concepts and using multiple steps.

Interpret and communicate quantitative information and mathematical concepts using appropriate language for the context.

Present written or verbal justifications that include appropriate discussion of the mathematics involved.

Use estimation skills to predict and check answers to mathematical problems in order to determine reasonableness of solutions.

Make sense of problems, develop strategies to find solutions, and persevere in solving them.

Read and interpret authentic texts containing quantitative information.

Use technology when appropriate for a given context.

Topical Standards

Develop study skills, habits, and perseverance needed in college Math courses.

Write algebraic expressions, equations, and inequalities to represent contextualized applications.

Recognize and graph linear functions.

Solve literal equations.

Solve 2 x 2 systems of linear equations.

Use rules of exponents to simplify expressions.

Perform operations on polynomial expressions

Factor polynomials using a variety of methods.

Perform algebraic operations with radical expressions.

Convert expressions between radical form and exponential form.

Simplify and perform operations on rational expressions.

Solve rational, radical, and quadratic equations analytically.

Solve applied mathematics problems involving linear, quadratic, rational, and radical models.

Solve a variety of math problems using multiple representations including tables, graphs, words and symbols.

Interpret solutions of problems in context and determine if quantitative results are reasonable.

Translate between graphical, tabular, verbal and symbolic representations of functions and relations.

Identify the domain and range of functions and relations.

Use function notation and evaluate functions for specified domain values.

Is this course part of a transfer pathway: Yes ☐   No ☒

*If yes, please list the competencies below

Revised Date: 1/27/2022