BAKER COLLEGE
STUDENT LEARNING OUTCOMES

MTH 1120 College Algebra II
3 Credit Hours

Student Learning Outcomes and Enabling Objectives

1. Analyze equations and functions.
    a. Describe functions, inverse functions, and their properties.
    b. Perform operations with functions, including function composition.
    c. Construct graphs of functions as well as interpreting graphs.
    d. Apply functions to real-world situations.
2. Analyze radical expressions and functions.
    a. Convert between radical and rational exponents.
    b. Solve radical equations and apply radical expressions to real-world situations.
    c. Describe radical expressions, functions, and their properties.
    d. Construct graphs of radical functions
    e. Perform operations with radical expressions and related functions.
    f. Perform basic operations with complex numbers.
3. Analyze polynomial and rational equations and functions; in particular quadratic equations and functions.
    a. Solve quadratic equations by means of graphs, factoring, completing the square, the square root property, and the quadratic formula.
    b. Solve rational equations.
    c. Construct graphs of polynomial and rational functions.
    d. Apply quadratic and polynomial functions to real-world situations.
4. Analyze exponential and logarithmic functions.
    a. Describe exponential and logarithmic functions and their properties.
    b. Perform operations with exponential and logarithmic functions.
    c. Solve equations involving logarithmic functions.
    d. Construct graphs of exponential and logarithmic functions.
    e. Apply exponential and logarithmic functions, including growth and decay models, to real world problems
5. Analyze conic sections.
    a. Recognize standard forms of the equations for conic sections.
    b. Construct graphs of conic sections.

    c. Apply conic sections to real-world situations.
6. Analyze sequences and series.
    a. Distinguish between arithmetic and geometric series.
    b. Identify patterns using summation notation.
    c. Calculate sums using summation notation.
    d. Apply sequences and series to real-world problems.

Big Ideas and Essential Questions

Big Ideas

- Functions
- Conic Sections
- Arithmetic and Geometric Series

Essential Questions

1. How can functions be used to solve real world problems?
2. How does the algebraic description of shapes and graphs allow me to analyze the world around me?
3. How can sequences and series help me to describe patterns?

These SLOs are not approved for experiential credit.

Effective: Fall 2021