Spokane Community College

COURSE LEARNING OUTCOMES (CLO) AND OUTLINE

Course Title: Precalculus I
Prefix and Course Number: Math& 141
Version Date: 3/15/2022

Course Learning Outcomes

By the end of this course, a student should be able to:

1. Communicate mathematical ideas in both everyday and mathematical language, using appropriate vocabulary and notation.
2. Solve multistep and open-ended problems as well as reflect on the reasonableness of solutions.
3. Develop proficiency with and understand uses and limitations of technology.
4. Construct, analyze, graph, and describe the characteristics of polynomial, rational, exponential, and logarithmic functions.
5. Model real world and geometric situations and identify limitations of mathematical models.
6. Use algebraic reasoning to identify domain restrictions, find solutions sets, and simplify expressions.

Course Outline:

I. Graphs & Functions
   - A. Function Notation
   - B. Combining Functions
   - C. Domain and Range
   - D. Transformations
   - E. Average rate of change

II. Polynomials & Rationals
   - A. Factoring techniques to locate roots
   - B. Intercepts
   - C. Asymptotes and end behavior
   - D. Inequalities
   - E. Modeling and applications

III. Exponentials & Logarithms
   - A. Composite and Inverse
   - B. Properties
   - C. Solving Equations
   - D. Modeling and applications

IV. Other
   A. Matrices - Systems of Equations
   B. Modeling and applications of Systems of Equations
   C. Sequences & Summation Notation