



## COLLEGEWIDE CORE COURSE PERFORMANCE OBJECTIVES (CCPOS)

The student will be able to:

1. Evaluate algebraic equations. (CCC 1, 2, 5, 7)
2. Analyze the graphical representation of linear, quadratic, and exponential functions. (CCC 1, 2, 5, 6)
3. Develop, solve, and interpret systems of linear equations and inequalities. (CCC 1, 2, 5, 6, 7)
4. Construct functions that model real world applications. (CCC 1, 2, 3, 5, 6, 7, 9)
5. Apply mathematics of finance to consumer issues. (CCC 1, 5, 6, 7)
6. Apply basic calculus concepts to mathematical problem solving. (CCC 1, 2, 5, 6, 7, 9)
7. Utilize technology necessary to collect, interpret and extrapolate data. (CCC 6, 7)

## MEASURABLE PERFORMANCE OBJECTIVES (MPO'S)

The student will be able to:

- 1. Evaluate algebraic equations. (CCC 1, 2, 5, 7)**
  - 1.1 Manipulate polynomials using the four operations.
  - 1.2 Utilize the graphing calculator to enhance problem solving.
- 2. Analyze the graphical representation of linear, quadratic, and exponential functions. (CCC 1, 2, 5, 6)**
  - 2.1 Interpret and critique graphs derived from educational settings and/or test results.
  - 2.2 Analyze graphs from periodicals, journals, and testing programs.
  - 2.3 Predict outcomes based on the linear, quadratic, or exponential representation of a function.
  - 2.4 Verbally present functions describing their parameters and behaviors.
- 3. Develop, solve, and interpret systems of linear equations and inequalities. (CCC 1, 2, 5, 6, 7)**
  - 3.1 Evaluate systems of linear equations algebraically.
  - 3.2 Interpret solutions of linear systems using graphing technology.
  - 3.3 Analyze linear systems using computer software.
- 4. Construct functions that model real world applications. (CCC 1, 2, 3, 5, 6, 7, 9)**
  - 4.1 Utilize data collection technology.
  - 4.2 Construct a scenario to match the graph of a given function.
  - 4.3 Design a mathematical function to model given data.
  - 4.4 Interpret data within the constraints of the technology used.

5. **Apply mathematics of finance to consumer issues. (CCC 1, 5, 6, 7)**
  - 5.1 Differentiate between the appropriate application of simple and compound interest, comparing and contrasting the resulting data within a given situation.
  - 5.2 Calculate effective interest rate and values of annuities.
  - 5.3 Create situations which represent a calculated present value.
  
6. **Apply basic calculus concepts to mathematical problem solving. (CCC 1, 2, 5, 6, 7, 9)**
  - 6.1 Determine areas of geometrical figures.
  - 6.2 Interpret the concept of the derivative and the definite integral using the graphing calculator.
  - 6.3 Apply basic rules of differentiation to problem solving.
  
7. **Utilize technology necessary to collect, interpret, and extrapolate data. (CCC 6,7)**
  - 7.1 Generate graphs from collected data.
  - 7.2 Present an interpretation of the collected data.

## **EVALUATION CRITERIA**

Students will demonstrate proficiency on all measurable performance objectives at least to the 75% level. The grade will be determined using the College Grading System:

92-100 A  
83-91 B  
75-82 C  
0-74 R

**Students should refer to the Student Handbook for information on Academic Standing Policy, Academic Honesty Policy, Student Rights and Responsibilities and other policies relevant to their academic progress.**