

Common Course Outline
MATH 082
Introductory Algebra
0 Credits

Community College of Baltimore County

Description

MATH 082 – Introductory Algebra covers first degree equations and inequalities, linear equations, systems of equations, polynomials, factoring, and descriptive statistics.

0 Credits: 1-3 billable hours

Prerequisites: MATH 081 or a satisfactory score on the math placement test

Co-requisite: ACLT 052 or ESOL 044

Overall Course Objectives

Upon completion of this course students will be able to:

1. interpret and calculate slopes;
2. determine equations of lines;
3. apply rules of integer exponents;
4. perform operations on polynomials;
5. factor polynomials and trinomials of the form $ax^2 + bx + c$, $a \neq 0$;
6. solve quadratic equations by factoring;
7. graph linear equations;
8. solve systems of linear equations;
9. solve application problems using linear systems;
10. generate and interpret statistical graphs;
11. describe and summarize data with appropriate measures of center and variation;
12. interpret differences in shape, center, spread in the context of the data sets, and account for possible effects of outliers; and
13. apply appropriate statistical measures to make informed decisions.

Major Topics

- I. Graphs of Linear Equations
 - A. Use rectangular coordinate system
 - B. Find slope of a line
 - C. Graph linear equations
- II. Systems of Linear Equations
 - A. Solve systems by the graphing method
 - B. Solve systems by the substitution method
 - C. Solve systems by the addition method

- D. Solve application problems using systems of equations
- III. Polynomials
- A. Use product, quotient, and power rules
 - B. Use negative exponents
 - C. Use scientific notation
 - D. Add and subtract polynomials
 - E. Multiply polynomials
 - F. Divide by monomials
- IV. Factoring
- A. Find greatest common factor
 - B. Factor trinomials of the form $ax^2 + bx + ac$, $a \neq 0$
 - C. Factor perfect square binomials
 - D. Factor perfect square trinomials
 - E. Solve quadratic equations by factoring
- V. Organizing Data
- A. Recognize types of data
 - B. Organize and graph categorical data
 - C. Organize and graph quantitative data
- VI. Descriptive Measures
- A. Calculate and interpret measures of center
 - B. Calculate and interpret measures of variation
 - C. Calculate and interpret measures of position

Course Requirements

Students must have an overall average of 70% or higher to pass this course. Grading procedures will be determined by the individual faculty member but will include the following:

Grading/exams

- A minimum requirement of at least one exam and a Cumulative Departmental Final Exam.
- A Cumulative Departmental Final Exam will count 30% of the course grade.

Other Course Information

This course is offered in several formats including, but not limited to, self-paced, lecture, and online.