

# Common Course Outline

## MATH 082

### Introductory Algebra

3 Semester Hours

## The Community College of Baltimore County

### Description

Topics include first degree equations and inequalities, linear equations, systems of equations, polynomials, and factoring. Pre-requisites: MATH 081, or a satisfactory score on the Math placement test, and RDNG 051 or ESOL 053 or LVR 1.

### Overall Course Objectives

Upon completion of this course the student will be able to:

1. Solve linear equations in one variable
2. Use linear equations to solve word problems.
3. Solve linear inequalities in one variable.
4. Use linear inequalities to solve word problems.
5. Interpret and calculate slopes.
6. Apply rules of integer exponents.
7. Perform operations on polynomials.
8. Factor polynomials (binomial and trinomials).
9. Graph linear equations
10. Solve systems of linear equations

### Major Topics

- I. Linear Equations in One Variable & Applications
  - A. Properties
  - B. Solve Linear Equations
  - C. Applied Problems
  - D. Formulas
- II. Linear Inequalities in One Variable
  - A. Solve Linear Inequalities
  - B. Set Operation
  - C. Compound Inequalities
- III. Linear Equations and
  - A. Rectangular Coordinate System
  - B. Slope of a Line
  - C. Graph Linear Equations
- IV. Systems of Linear Equations

- A. Solve by the Graphing Method
- B. Solve by the Substitution Method
- C. Solve by the Addition Method
- D. Applications
- V. Exponents
  - A. Product, Quotient, and Power Rules
  - B. Scientific Notation
- VI. Polynomials
  - A. Add, Subtract, Multiply and Divide Polynomials
  - B. Products of Polynomials
  - C. Division of Polynomials
- VII. Factoring
  - A. Greatest Common Factor
  - B. Factoring Trinomials
  - C. Special Factorization
  - D. Solve by Factoring

### **Course Requirements**

There will be multiple opportunities for the instructor to assess student progress through classwork and/or homework.

Grading/exams: Grading procedures will be determined by the individual faculty member but will include the following:

Quizzes and Final Exam: Final exam will count between 25% and 30% of the grade. Student must have an overall average of 70 % to pass this course.

Grade: 90-100%: A

80-89%: B

70-79%: C

Below 70%: Unsatisfactory Performance - Student will receive an F.

### **Other Course Information**

Optional Topics may include:

Real Numbers

Write the Equation of a Straight Line

Graph a System of Linear Inequalities in Two Variables

This course may be taught in a computerized environment.

The Community College of Baltimore County is committed to providing a high-quality learning experience that results in growth in knowledge, attitudes, and skills necessary to function successfully as a transfer student, in a career and as a citizen. To accomplish this goal, we maintain high academic standards and expect students to accept responsibility for their individual growth by attending classes, completing all homework and other assignments, participating in class activities and preparing for tests.

We take seriously our responsibility to maintain high-quality programs and will periodically ask you to participate in assessment activities to determine whether our students are attaining the knowledge, attitudes and skills appropriate to various courses and programs. The assessment activities may take many different forms such as surveys, standardized or faculty-developed tests, discussion groups or portfolio evaluations. We ask that you take these activities seriously so that we can obtain valid data to use for the continuous improvement of CCBC's courses and programs.

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