NCBS 403B: BRIDGE TO COLLEGE LEVEL MATHEMATICS II

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2024
Units:	0
Hours:	25 lecture per quarter (25 total per quarter)
Advisory:	Completion of NCBS 403A.
Degree & Credit Status:	Non-Degree-Applicable Non-Credit Course Basic Skills, 2 Levels Below Transfer
Foothill GE:	Non-GE
Transferable:	None
Grade Type:	Non-Credit Course (Receives no Grade)
Repeatability:	Unlimited Repeatability

Student Learning Outcomes

- "Students can identify one test-taking strategy to increase success on the placement exam.
- Students demonstrate mastery in an increased number of mathematical topics as described in the course objectives
- Students gain more math skills as described in the course objectives to increase score on placement exam.

Description

Part two of a bridge to college level mathematics program for students who seek to refresh mathematical reasoning, computational skills, and test-taking strategies. Topics include mathematical skills from beginning algebra and intermediate algebra.

Course Objectives

The student will be able to:

1. Solve linear equations and inequalities and systems of linear equations
2. Graph linear equations and find the equation of a line
3. Simplify algebraic expressions using laws of exponents
4. Factor polynomials
5. Evaluate expressions involving square roots

Course Content

1. Solve linear equations and inequalities and systems of linear equations
   a. Solve linear equations with rational coefficients
   b. Solve literal equations (formulas) for a specified variable
   c. Solve linear inequalities algebraically and graphically
   d. Solve system of linear equations algebraically and graphically
   e. Solve application problems involving linear equations and inequalities and systems of linear equations
2. Graph linear equations and find the equation of a line
   a. Identify slopes and y-intercepts from equations
   b. Write an equation of a line
   c. Graph a linear equation
   d. Model and solve problems involving linear functions
3. Simplify algebraic expressions using laws of exponents
   a. Multiply and divide numbers with exponents
   b. Evaluate numbers with positive, negative, and zero exponents
   c. Use properties of exponents to simplify algebraic expressions
4. Factor polynomials
   a. Factor quadratics with lead coefficient of one
   b. Factor quadratics with a lead coefficient that is not one
5. Evaluate expressions involving square roots

Lab Content

Not applicable.

Special Facilities and/or Equipment

Access to computers with internet capabilities.

Method(s) of Evaluation

Methods of Evaluation may include but are not limited to the following:

Homework
Quizzes
Class participation

Method(s) of Instruction

Methods of Instruction may include but are not limited to the following:

After an initial assessment, students will work online using software such as ALEKS to improve their understanding in identified areas of need
The instructor will offer whole-class mini-lectures on test-taking skills and selected math topics
The instructor will provide one-on-one in-class targeted support for individual needs around test-taking and specific math topics

Representative Text(s) and Other Materials

No text required.

Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments

Not applicable.

Discipline(s)

Mathematics-Basic Skills: Noncredit