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
- Simplify algebraic expressions using laws of exponents

 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