

Common Course Outline

EDTR 104 PRAXIS I: Preparation for Mathematics

1 credit (1 classroom hour per week)

The Community College of Baltimore County

Overall Course Description:

PRAXIS I: Preparation for Mathematics

Prepares teacher education candidates and provisional teachers for successful passage of the mathematics portion of the PRAXIS I series. Concepts and skills measured by the test are reviewed. Test format and question types are analyzed. Test-taking strategies are developed. PRAXIS I is required for entry into most Maryland four-year teacher education programs and for the Maryland State Department of Education to review student transcripts. Prerequisites: (ENGL 051 or LVE 1) and (RDNG 051 or LVR 1)

Overall Course Objectives:

The major objective of the course is to prepare prospective and provisional teachers for successful completion of the mathematics portion of the PRAXIS I examination. Thus, the course objectives reflect the content of the PRAXIS examination. The focus of the course is on the key concepts of mathematics and the ability to solve problems and to reason in a quantitative context. Successful completion of the course requires the integration of multiple skills to achieve a solution. The five major objectives of the course are:

Students will demonstrate an understanding of the foundational ideas of numbers, number properties, and operations defined on numbers.

Students will demonstrate an understanding of the procedures required to represent quantitative relationships and the ability to plan, execute, interpret and complete operations to solve problems.

Students will demonstrate an ability to interpret visual displays of quantitative information, to determine whether statements based on data are true or false, to make inferences from data, and to represent a given set of data graphically.

Students will demonstrate an understanding of measurement, of the U.S. customary and metric systems of measurement, and of geometric properties and relationships.

Students will demonstrate an ability to use basic logic in a quantitative setting.

Major Topics:

Mathematical Power
Estimation
Mathematical Patterns
Problem Solving

Number Sense
Exploring whole numbers, integers, fractions and decimals
Order
Equivalence
Properties of operations on numbers

Operations
Computations
Identifying information or operations needed to solve problems

Mathematical Relationships
Exploring ratio and proportion
Using proportional reasoning
Variables, expressions and equations

Geometry and Measurement
Lines and angles
Two and three-dimensional figures
Measurement
Perimeter
Area and volume

Logic
Basic principles of logic
Using logic

Techniques for successful test-taking

Requirements:

As the course begins, the student will complete a mathematical inventory, consisting of a pre-test, a questionnaire, and an interview with the instructor. Based on this information, the student will identify specific learning objectives and strategies for the course. Students will reinforce concepts discussed in class with six twenty-minute quizzes. There will be a final examination. Student assignments will be from a workbook, a computer program, and readings.