



# GACE® Elementary Education Assessment Test II (002) Curriculum Crosswalk

## Required Coursework Numbers

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|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| <b>Subarea I. Mathematics (53%)</b>   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <i>Objective 1: Understands and applies knowledge of counting and cardinality</i>   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A. Knows ways to help students make sense of numbers by comparing, ordering, and connecting numbers to quantities   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <i>Objective 2: Understands and applies knowledge of operations and algebraic thinking</i>  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A. Knows ways to help students develop an understanding of equations, number operations, and the relationship between the operations and their properties |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B. Knows how to represent and solve problems involving addition and subtraction to help students gain foundations for multiplication and division         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| C. Knows how to write, interpret, analyze, and evaluate numerical expressions, patterns, and relationships  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <i>Objective 3: Understands and applies knowledge of numbers and operations in base 10</i>  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A. Knows ways to help students gain foundations for place value, use place value, and understand the properties of operations                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B. Knows how to generalize and use place-value understanding of multi-digit numbers to perform multi-digit operations, including operations with decimals |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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| <i>Objective 4: Understands and applies knowledge of numbers and fractions</i>  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A. Knows ways to help students develop an understanding of fractions as numbers   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B. Knows ways to help students apply previous understanding of multiplication to multiply or divide a fraction or whole number by a fraction and to solve real-world problems involving fractions |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <i>Objective 5: Understands and applies knowledge of measurement concepts and data</i>  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A. Knows ways to help students identify, classify, describe, and compare the measurable attributes of objects   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B. Knows how to represent and interpret data  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| C. Knows how to relate addition and subtraction to length and solve problems involving measurements   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D. Knows how to promote students' understanding of the concepts of perimeter and area   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| E. Knows how to promote students' understanding of the concepts of angle, measurement of angles, and volume, and can relate volume to multiplication and division                                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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| <i>Objective 6: Understands and applies knowledge of geometry</i>   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A. Knows how to reason with shapes and their attributes   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B. Knows how to graph points on the coordinate plane to solve real-world and mathematical problems  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| C. Knows how to draw and identify lines and angles and can classify shapes by properties of their lines and angles  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>Subarea II. Science (30%)</b>  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <i>Objective 1: Understands characteristics of science</i>  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A. Knows the skills necessary for scientific investigation, developing a scientific inquiry mind set, and communicating scientific ideas and activities clearly |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B. Understands the ideas of system, model, change, and scale in exploring scientific and technological matters  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| C. Understands the important features of the process of scientific inquiry and the nature of science, technology, and the environment                           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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| <i>Objective 2: Understands and applies knowledge of Earth science</i>  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A. Understands time patterns such as day and night, patterns in climate and weather, and changes in the environment         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B. Is familiar with the physical attributes of rocks and soil and understands how fossils are formed                        |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| C. Is familiar with the surface features of Earth caused by constructive and destructive processes                          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <i>Objective 3: Understands and applies knowledge of physical science</i>   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A. Knows how to describe objects in terms of their properties   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B. Understands important physical science concepts  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <i>Objective 4: Understands and applies knowledge of life science</i>   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A. Knows the characteristics of living and nonliving things   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B. Understands the life cycle of different living things, the habitats of organisms, and their dependence on their habitats |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| C. Understand interactions between organisms and their environments   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D. Understands inherited traits, learned behaviors, and other factors that affect the survival of organisms                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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| <b>Subarea III. Health Education, Physical Education, and the Arts (17%)</b>  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <i>Objective 1: Understands and applies knowledge of health and physical education concepts and influences</i>  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A. Knows concepts related to health promotion and disease prevention and ways to enhance health   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B. Understands the influence of family, peers, culture, media, technology, and other factors on health behaviors  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| C. Knows how to advocate for personal, family, and community health   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D. Understands motor skills and movement patterns needed to perform a variety of activities   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| E. Knows how to promote a health-enhancing level of physical fitness, responsible personal and social behavior, and respect for self and others in physical activity settings |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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| <i>Objective 2: Understands and applies knowledge of the arts (dance, music, visual arts, and theater arts)</i>           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A. Knows fundamental concepts, principles, skills, and terminology related to dance, music, theater arts, and visual arts |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B. Knows the basic techniques, tools, processes, and materials for producing work in the arts                             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| C. Knows how art can be used as a form of self-expression, communication, and social expression                           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| D. Knows strategies to promote critical analysis and understanding of the arts  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| E. Knows the role and function of the arts in various cultures and throughout history                                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |