

Instructor: William Burnette, Adjunct Instructor **E-mail:** wburnette@randolphcollege.edu

Course Title: Concepts of Elementary School Mathematics

Texts: Billstein, R., Libeskind, S., Lott, J.W., (2013). *A Problem Solving Approach to Mathematics for Elementary School Teachers*. (11th ed.). Boston: Pearson.

Credit: 4 Semester Hours

Course Description: This course will provide you with the proper foundation for and understanding of the mathematical concepts you will teach to elementary school children. Topics will include the structure and properties of number systems and of Euclidean Geometry. Investigations through the use of manipulatives and technology in these topics will highlight the National Council of Teachers of Mathematics' (NCTM) Process Standards a) Problem Solving, b) Reasoning and Proof, c) Communication, d) Connections, e) Representation, and the Virginia Department of Education's Standards of Learning.

Course Objectives:

Students will deepen their understandings of –

- number systems, their structure, basic operations, number sense, and properties.
- computation and estimation, computational strategies, ratios, proportions, and percents.
- algebra including: patterns, algebraic thinking, and operations using multiple representations.
- geometry including: geometric figures, Pythagorean Theorem, perimeter, area, surface area of two- and three- dimensional figures, coordinate and transformational geometry.
- probability and statistics including: permutations and combinations, experimental vs theoretical, and measures of central tendency.

Course Requirements and Evaluation:

Participation, in-class activities	20%	Not completing one of these requirements will result in a maximum grade of a B.
Homework	20%	
Quizzes	30%	
Final Exam	30%	

Grading Scale:

A	93 – 100
A-	90 – 92.9
B+	87 – 89.9
B	83 – 86.9
B-	80 – 82.9
C+	77 – 79.9
C	73 – 76.9
C-	70 – 72.9
D+	67 – 69.9
D	63 – 66.9
D-	60 – 62.9
F	0 – 59.9

Due to the quick pace of the course, students are expected to participate and turn in assignments weekly. Live sessions will be available for students to attend as well as the recording from those sessions. Weekly discussions, assignments, and quizzes will need to be completed on time. The student is responsible for all material covered in class. Failure to participate will affect the quality of learning and will ultimately impact the course grade. Unless the student has extenuating circumstances, or a prior arrangement has been made, he/she will be expected to take a quiz the day it is scheduled.

The Randolph College Honor Code is to be applied in this course at all times. All written work is to be the original work of the student submitting the paper (any ideas or quotes taken from a resource are to be cited within the paper using APA format). Students must proof read and edit all written work.

Disability Accommodations – Students with a disability requiring special consideration: Please provide the professor of this course with the appropriate letter from the Learning Resources Center indicating what accommodations are required; the professor will make every effort to meet those needs. Please consult with Tina Barnes in the LRC if you need more information.

At Randolph College, all college faculty members are mandated reporters of any form of abuse.

Tentative Course Schedule

The professor of this class reserves the right to modify the syllabus when it is academically sound and with sufficient notice to the students.

Week	Date	Topic
1		Numeration Systems
		Whole Numbers – Addition/Subtraction Algorithms
		Whole Numbers – Multiplication/Division Algorithms, Properties
		Prime/Composite Numbers, Divisibility
		Integers – Addition/Subtraction/Multiplication/Division
		Quiz 1
2		Rational Numbers – Addition/Subtraction
		Rational Numbers – Multiplication/Division
		Rational Numbers – Decimals/Percent's
		Proportional Reasoning
		Quiz 2
3		Algebra
		Algebra
		Algebra
		Algebra
		Quiz 3
4		Geometry
		Geometry
		Geometry
		Geometry
		Quiz 4
5		Probability/Statistics
		Probability/Statistics
		Probability/Statistics
		Review/Question Session