

MA 306 MATHEMATICS FOR THE ELEMENTARY SCHOOL TEACHER

Course Description: (3 semester hours) The number system; the number line; sentences and statements; logic; sets; relations and functions; modern trends in mathematics education. Does not satisfy requirement for mathematics major, minor, or general studies component. (Fall, Spring) The University of North Alabama Catalog

Prerequisite: None officially, but it is recommended that students complete the elementary education mathematics requirement before taking this course.

Course Objective: The student will attain mastery of the mathematics content of the elementary curriculum; develop skills and resources for teaching mathematics concepts to children; improve problem solving skills; and develop positive attitudes toward mathematics.

Course Content and Outline: This course contains both subject matter content and methods.

Computation skills are stressed in the arithmetic of whole numbers, rational numbers and integers. (CF#1)

The course emphasizes developing skills for teaching problem solving through multiple representations in a conceptually grounded manner using manipulatives and algorithms. (CF#1, CF#5)

Practice in preparing and presenting mathematics lessons is also included. (CF#1, CF#3, CF#5)

Specific topics include

1. Problem Solving. (CF#1, CF#5, CF#6)
2. Structure and algorithms of the set of whole numbers including standard and alternative algorithms. (CF#1, CF#5)
3. Number theory (CF#1)
4. Rational number (CF#1, CF#5)
5. Integers (CF#1, CF#5)
6. Geometry (CF#1, CF#5)

Course Requirements:

Regular class attendance

Satisfactory grade on the arithmetic test

Satisfactory grade on class tests

Completion of homework and projects

Three hours of clinical observations (CF#6)

Assigned grades will be 90% for A, 80% for B, 70% for C, 60% for D and below 60% F.

Calculator Policy: Please refer to your instructor's course syllabus to find their course-specific calculator policy.

ACCOMMODATION STATEMENT: In accordance with the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973, the University offers reasonable accommodations to students with eligible documented learning, physical and/or psychological disabilities. Under Title II of the Americans with Disabilities Act (ADA) of 1990 and Section 504 of the Rehabilitation Act of 1973, a disability is defined as a physical or mental impairment that substantially limits one or more major life activities as compared to an average person in the population. It is the responsibility of the student to contact *Developmental Services* prior to the beginning of the semester to initiate the accommodation process and to notify instructors within the first three class meetings to develop an accommodation plan. Appropriate, reasonable accommodations will be made to allow each student to meet course requirements, but no fundamental or substantial alteration of academic standards will be made. Students needing assistance should contact *Developmental Services*.