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 AL 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; demonstrate mastery of course content; develop skills and resources for teaching mathematics concepts to children; improve problem solving skills; and develop positive attitudes toward mathematics. 290-3-3-.06(2)(b)3.(ii)(IV) (CF#1) 290-3-3-.06(2)(b)3.(ii)(VI) (CF#1)

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 computational algorithms 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)
Techniques for using manipulative materials, technology, and student interaction as instruments for enhancing development and learning. 290-3-3-.06(2)(b)3.(ii)(IV) (CF#1, CF#4)

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

Course Requirements:
Regular class attendance
Satisfactory grade on the arithmetic test
Satisfactory grade on class tests 290-3-3-.06(2)(b)3.(ii)(VI)
Completion of homework and projects 290-3-3-.06(2)(b)3.(ii)(IV)
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.

Revised September 2013