Course Description:
Prerequisites: EDN 301 and six semester hours of appropriate mathematics. Co-requisite: EDNL 322. Focus on the curriculum, materials, and methods appropriate for the teaching of mathematics for the kindergarten through sixth grade level. A field-based activity is required.

Conceptual Framework:
The Watson School of Education strives to educate quality teachers who are proficient as a decision-maker and reflective practitioner. EDN 322, The Teaching of Mathematics (K-6), supports this framework through discussions, class activities, readings, field experience, projects and evaluations. All projects require students to take an active role in decision-making. For example, students develop a two-week unit of instruction that requires them to consult a variety of resources and make evaluative decisions in order to incorporate the most effective strategies and practice. An integral part of the field experience is the analysis and reflection on instructional practices and student learning.

Objectives:
The assessment plan correlates with the course objectives and indicates how the student demonstrates acquisition of concepts and skills. Upon successfully completing this course, the student should be able to:

1. demonstrate an understanding of the mathematical content which underlies the mathematics taught at the K-6 level.
2. compare the NCTM Standards with mathematics curricula and instruction at the K-6 level.
3. relate selected concepts in learning and child development to mathematics instruction.
4. use informal diagnostic techniques in planning instruction.
5. identify commercial, environmental, and technology-based materials useful in the teaching of mathematics.
6. integrate mathematics with other elementary subjects.
7. generate instructional sequences on topics such as:
   - classification
   - seriation
   - patterning
   - concept of number
   - rote counting
   - rational counting
   - numeral formation
   - place value
   - basic operations
   - fractions
   - intuitive geometry
   - estimation
   - whole number algorithms
   - basic fact mastery
   - money and time
   - graphing
   - probability and statistics
   - measurement
8. design activities to help children learn facts, acquire skills, develop concepts in mathematics and use calculators appropriately in applying concepts.
9. modify mathematics curriculum and instruction to meet individual needs.
10. apply the criteria of a good K-6 mathematics program according to the North Carolina Department of Public Instruction and the National Council of Teachers of Mathematics.
Texts:
- Course packet. EDN 322, The Teaching of Mathematics K-6

Expectations:
Attendance
Because the instructor will model various practices advocated for classroom use, and because peer interaction is an important component of learning in this course, promptness and active participation is expected at every class. Your class folder serves as your attendance record. Please check its accuracy at the start of each class and signal any discrepancies as soon as possible. Students having more than three (3) absences will have 10 points deducted from their final grade. Three (3) tardies and/or early departures are equivalent to one absence. Missing more than six (6) classes will result in a failing grade.

If you are absent, materials distributed in class will be placed in your folder. Please plan to confer with a classmate concerning material you missed.

Effort
Successful completion of EDN 322 requires active class participation, thoughtful completion of assignments, and careful consideration of all assigned reading. Tests will cover all assigned readings and projects as well as material discussed in class.

COURSE OUTLINE

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*Please complete the assigned reading before class.

Instructor Availability:
Office hours are scheduled (see page one of this syllabus). You are also free to call the office any time. I will check voice mail each evening before 9:00 and return phone calls. Contact can also be made by e-mail.

Disability Services:
**If you are a person with a disability and anticipate needing accommodations of any type in order to participate in this class, you must notify Disability Services (Westside Hall, 962-3746), provide the necessary documentation of the disability and arrange for the appropriate authorized accommodations. Once these accommodations are approved, please identify yourself to me so that the accommodations can be implemented.
Grading:
During this course, you can earn a total of 400 points. All tests and assignments are listed below. No extra projects will be accepted. Please keep a running total of the points you have earned on this syllabus. Grades will be determined as follows:

A  = 371-400 points  B- = 320-330 points  C- = 280-290 points
A- = 360-370 points  C+ = 310-319 points  D  = 240-279 points
B+ = 350-359 points  C  = 291-309 points  F  = below 240 points
B  = 331-349 points

TESTS
Test I  Date: February 24, 2005   95 points   ____
Test II Date: April 21, 2005   100 points   ____

The first test will focus on the foundations of K-6 mathematics as covered up to the date of the test. Test II will focus on topics covered after Test I, but may include material from any part of the course. All class discussions, handouts, and assigned readings may be included. Because it is an unsuccessful strategy, cramming is not recommended.

PROJECTS

All materials submitted for grading must be well-edited and typed. You may neatly handwrite any assignment to be submitted on a required form. Projects which do not meet these standards will be returned ungraded. Grades on late projects may be decreased by 1 point per day.

1. Math Autobiography  Due: January 11  Possible Points: 5 points  Attained Points: (On Test I)
   In about 2 typed pages, describe your previous experiences as a mathematics student in elementary school, in secondary school and in college. Discuss what material was covered, how it was taught, and how you felt about it. Then discuss how you feel about taking this course and about teaching mathematics. This paper will be completely confidential and will not be returned. Put your name on a cover sheet only. The 5 points will be added to your Test I score for the completion of this project.

2. Textbook Review  Due: January 27  20 points  ____

3. Software or Web Resource Review  Due: March 10  20 points  ____

4. Number Facts Assessment or Piagetian Task  Due: March 17  20 points  ____

5. Algorithm Demonstration  Due: Week of April 5  20 points  ____

6. Unit Plan  Due: Part I - February 3  5 points  ____
   Due: Part II – March 31  75 points  ____

   A. Activity Construction  Due: February 17  20 points  ____
   B. Connections Project  Due: March 31  20 points  ____

7. Field Experience  Successful completion of the field experience requires attendance of EDNL 322 class meetings and completion of tasks as outlined in the EDNL 322 syllabus.

   Tutor one child for 10 hours using a hands-on approach. Lesson plans must be approved by the Lab instructor before each session and must include the use of developmentally appropriate manipulatives. Tutoring sessions should begin as soon as possible.