

## **MATH 2008 – Foundations of Numbers and Operations**

Fall 2009

**Cynthia Smith**

**Office Hours:**

Tu/Th 3:15 – 4:00 p.m.

Or By Appointment

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**PREREQUISITE:** MATH 1101, MATH 1111, or MATH 1113

**COURSE DESCRIPTION:** This course is an Area F introductory mathematics course for early childhood education majors. This course will emphasize the understanding and use of the major concepts of number and operations. As a general theme, strategies of problem solving will be used and discussed in the context of various topics.

**TEXTBOOK:** *Mathematics for Elementary Teachers, 3<sup>rd</sup> Edition* (2001), Bassarear, Houghton Mifflin Company

**COURSE OBJECTIVES:** This course focuses on preparing early childhood education majors to:

- Understand and use the major concepts of number and operations in mathematics for grades P-5.
- Solve problems using multiple strategies, manipulatives, and technological tools; interpret solutions; and determine the reasonableness of answers and efficiency of methods.
- Communicate using precise mathematical terminology
- Construct and justify arguments as well as interpret solutions; and determine reasonableness of answers and efficiency of methods

**LEARNING OUTCOMES:** All students will learn to:

- Understand numbers, ways of representing numbers, relationships among numbers, and number systems.
- Understand meanings of operations and how they relate to one another.
- Compute fluently and make reasonable estimates.
- Apply multiple problem solving strategies and understand how approaches to solutions relate to one another.

### **PERFORMANCE ASSESSMENT AND EVALUATION:**

Four in-class tests will be given. Tests will consist of open-ended questions. Those questions that require an explanation will be graded using the “rubric for grading problems with explanations.” Possible assessment techniques include, but are not limited to, the use of projects, in-class presentations, tests, reflective logs, interviews, written analysis of classroom videos, peer and self-assessment, and content proficiency demonstrations. Graded assignments are due at the beginning of the class period and will not be accepted late. If you will not be in class on a day that an assignment is due, you may email it or place it in my mailbox before class starts or send with another student. **Tests and graded assignments will count 2/3 of the final course grade.**

**A comprehensive final exam will count the remaining 1/3.** The grading scale will be A, 100-90%; B, 89 – 80%; C, 79 – 70%; D, 69 – 60%; and F, below 60%.

**TEST DATES:** Test 1 – Thursday, September 17  
Test 2 – Thursday, October 8  
Test 3 – Thursday, November 5  
Test 4 – Thursday, December 3  
Final Examination – 6:00 pm – 8:00 pm on **Thursday, December 10**, in classroom

**MAKE-UPS:**

There will be absolutely NO make-up tests. If you miss a test, you receive a grade of zero for that test. I will allow you to take a test at a time other than the class period *if you inform me in advance* and provide documentation in the form of a note from a coach, club sponsor, doctor, or other appropriate party.

**ATTENDANCE POLICIES:** Attendance will be recorded. You **MAY** be dropped if you miss more than 10% of all classes. Midterm (October 12) is the last day to drop or be dropped without penalty. Please see me if you are considering dropping the course. Please obtain prior permission from the instructor before bringing visitors (including children) to class.

**HOMEWORK:**

Homework problems for each section will be assigned during class. I will not collect or grade this homework, however, you should be prepared to discuss the answers in class. Occasionally, there will be supplemental worksheets which will be turned in for grades. You should allocate at least ten hours per week for working homework problems.

**EXPECTATIONS:**

I expect that you attend each class, complete each homework assignment, complete handouts, and abide by the Student Code of Conduct (see the Student Handbook) and the policy on Academic Honesty (see the University Catalog).

**OTHER:**

University policy prohibits the use of cellular phones or pagers in the classroom and requires that only those who are registered in a class may attend. Any mechanical or electronic recording of class activities must first be approved by me. If you have a disability and wish to receive accommodations in class, please apply with the Office of Disability Services in Bellevue Hall.