

**Math 531: Developing Number Sense and Arithmetic K-8
Summer, 2003**

Course Instructor:	Dr. Stephen Smith
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Office Hours:	By arrangement

TENTATIVE Description of the Course:

I envision this course to be somewhat similar to the undergraduate mathematics content course(s) you took in preparing to be an elementary teacher. As with such courses, it will examine a portion of the elementary school mathematics curriculum from an advanced standpoint. Since you have already taken such courses and are in-service teachers, this course will draw on your experiences to critique both content and pedagogy. We will tie content with your teaching experiences. Based on the email responses I received, we will start our content focus with probability. We may spend the whole time on this topic or move to statistics or geometry. We can negotiate the particulars as the class develops. The key, of course, is for the course to be of use to you as teachers.

For most class sessions, I expect we will have the following format: Do a mathematical activity in pairs (collect data, solve problems, etc.); discuss the mathematics; discuss how the activity might be used in elementary school (at your particular grade level)—what students might need to know prior to the activity, how it might be introduced, what pedagogical or management issues might arise, the teacher's role, and so forth. We will explore these ideas and issues through the lens of the NCTM Standards.

Prerequisite: Permission of the instructor.

Textbooks and Materials required:

Bassarear, T. (2001) *Mathematics for elementary teachers*. Second edition. Houghton Mifflin: Boston.

I will assign (& provide) supplemental readings as appropriate.

A scientific calculator.

Assessment:

Participation is an important part of the course and will be assessed on an ongoing, informal basis. Participation means daily attendance (and timely arrival) along with adequate preparation and active contribution to the professional conversations of our class.

There will be 3 tests—one each of the three Fridays we meet—they will be administered the second hour of class (but may not take you an hour to complete, you may leave when you are done). **A make-up for a missed test will be given only under exceptional circumstances and with my prior approval.**

There will be two projects, one due on July 21st and the second on July 28th. Here is a synopsis. The first project will be done individually. You will select a set of lessons from one of the “reform” curricula sponsored by the NSF and analyze them. The second project will be done in pairs. You will plan and lead one of our class sessions during the final week. In addition, you will design a set of lessons on the same content for the elementary classroom. Details will follow for each project.

Tests (3 @ 50 pts each)	150 points
Projects (2 @ 50 points each)	100 points
Participation	100 points

Grading Scale

A	93-100 percent	A-	90-92 percent	B+	88-89 percent
B	83-87 percent	B-	80-82 percent	C+	77-79 percent
C	70-76 percent	C-	67-69 percent	D	60-66 percent

If you have a need for disability-related accommodations or services, please inform the Coordinator of Disability Services in the Disability Services Office at 1104 University Center (227-1737). Reasonable and effective accommodations and services will be provided to students if requests are made in a timely manner, with appropriate documentation, in accordance with federal, state, and University guidelines.