

SYLLABUS

Fall 2007

- Course:** M4010, Math for Elementary School Teachers I
(class meets MW, 4:35 – 6:35 LCB 121)
- Instructor:** Emina Alibegovic, JWB 312, 581-6710
<mailto:emina@math.utah.edu>
- Course website:** <http://www.math.utah.edu/~emina/teaching/4010f07>
- Office Hours:** M 1:30 – 3:00,
WF 10:00-11:30
And by appointment
- Text:** Mathematics for Elementary School Teachers 7th edition by
Musser, Burger, and Peterson
Graph paper Fractions Book, Union copy center
- Prerequisite:** Math 1050 with a grade of C or higher
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Course Content

This course is the first in a two-semester sequence of required mathematics courses for elementary school teachers. The sequence is designed to help K-6 pre-service teachers develop a conceptual framework for mathematics, especially for those aspects normally experienced in primary and elementary school. Through their work in each course in the sequence students examine the common threads of mathematics throughout the curriculum, consider both mathematical and pedagogical issues in teaching, and spend a six hour practicum in a local school relating their course work to the classroom situation.

Please note: This course is designed for pre-service elementary school teachers and requires time spent in the elementary school classroom. Students must complete the practicum (described below) in order to pass the course.

It is often wrongly assumed that having successfully finished high school is enough of a preparation for teaching K-6 students. Teaching mathematics requires a lot of specialized knowledge, knowledge that other professionals, although having had advanced mathematics courses, do not necessarily possess. Your job will be to prepare lessons and determine mathematical goals of activities. You will need to anticipate students' responses, the problems they might face and how to help them navigate through the new material. You will have to generate easier problems if you realize that your students have trouble with the ones you've given, or harder ones when you need to challenge your students more. You will need to choose good questions to ask, and learn how to lead classroom discussion. You will need to be able to evaluate explanations and arguments. You will need to listen to your students and their reasoning and decide whether what they are saying makes sense and why. The goal of this course is to, apart from revisiting and solidifying your knowledge of mathematics that is needed to teach K-6, acquire this specialized mathematical knowledge needed for teaching. We expect that you will see yourself as a teacher in both places rather than as a student here and an observer in school.

Course Work and Grading

Assignments/Quizzes, Portfolio	20%
Midterms (2)	36%
Practicum Report	15%
Attendance, participation	4%
<u>Final Exam</u>	<u>25%</u>
Total:	100%

Class work

We expect you **to come to every class on time, turn assignments when they are due, participate actively in classroom discussions and activities, and take notes in class.** Because you are preparing to be a teacher, your participation needs to reflect professional learning. This means it will not just be judged on the basis of its content but also on the basis of its form: You will need to speak audibly, connect with your audience, modulate the words you utter, and use standard English. We will give you feedback on what you say and on how you say it, in the understanding that it matters to you because so much of our work as teachers includes speaking for others to understand us. For the reason that you need to be prepared to think on your feet and talk in public you should expect to be called on even when you don't volunteer. It is fair game (and deserves all our respect) if you ask for time to think about something or if you say, "I don't know but here is how I would find out." For the same reason, we expect you will give us feedback when we speak in ways that are difficult to understand or to hear and that you will accept that at times we also need to regroup and think for a while.

We expect you **to ask questions.**

You are most welcome to provide feedback, written or oral, personal or anonymous at any time. Forms will be available on the course website for you to do so.

- 1. Portfolio:** The portfolio is a way to organize your work for the semester. It will count as two assignments. As the semester goes by you will do readings and homework and you'll also have time to reflect on issues of teaching and learning mathematics in response to the course. A rubric indicating explicitly what the portfolio should include will be handed out in class.
- 2. Assignments/Quizzes** There will be about 10 assignments/quizzes (including the portfolio) on the course work during the semester. These assignments will be given out in class on Wednesday and due the following Wednesday. Each assignment will include a brief in-class quiz on the day that the assignment is due. Since the lowest score will be dropped, late assignments will **not** be accepted. Assignments for the following week will often be discussed in class but will then be restated and clarified in a summary e-mail that we will send shortly after each class. You are expected to read your e-mail (in the event you cannot do that, please contact a classmate to get a printed copy of that e-mail—"I did not get your e-mail" is not a valid reason not to do the assignment). **Assignments and handouts will also be posted on the course website after each class—look in there for assigned readings and homework.**

Assignments should be neatly organized, well labeled and legible. The original assignment should be stapled to the front of the work. It should be stapled together before coming to class and is due at the beginning of class on the assigned day. I personally would prefer an electronic copy, and if you choose to do it that way you may submit your homework through WebCT. We will have an ongoing assignment which will consist of your contribution to class documents through participation on the class wiki page.

3. **Midterms:** There will be two midterms and the dates planned for these are listed below. If any change becomes necessary, an announcement will be made in class a week before the midterm is scheduled.
4. **Practicum:** Each student will spend six hours in an elementary school classroom, three periods observing and three periods working with one or two children in the classroom. This classroom experience will be the subject of some class discussion and an assignment so please make sure to complete your observations by October 17. The practicum report is a typewritten analysis of your mathematical work with the children. Be sure to keep careful notes from your work with the children in order to have the information available when you write your practicum report. This report is due **November 21** and will be discussed in detail in class. More details will follow concerning the written report.
5. **Final Exam:** The comprehensive final exam will be on the date listed below.
6. **Homework:** In addition to the assignments to be handed in, selected problems from the book will be assigned for discussion in class. You are strongly encouraged to read the book and work these problems to aid in understanding the material.
7. The **Americans with Disabilities Act** requires that reasonable accommodations be made for students with physical, sensory, cognitive, systemic, learning, and psychiatric disabilities. Please contact me at the **beginning** of the quarter to discuss any such accommodations for the course.
8. **Calculators:** You will need a calculator for the course and you will be expected to know your calculator well enough to make it perform the tasks required. Demonstrations will be done on the TI-84 or the TI-30-x. Calculators will not be allowed on exams.

Holidays: Labor day: Sept. 3 Fall Break: Oct 8-13 Thanksgiving: Nov. 22, 23	Exams: Midterms: 9/26, 10/31 Final: Dec. 10, 6:00pm.	Other dates: Drop day, 8/29 Withdraw day, 10/19
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