

<b>Course:</b>	M4010-2, Math for Elementary School Teachers I class meets MW, 4:30 – 6:35 pm LCB 121
<b>Instructor:</b>	Marilyn L. Keir, JWB 212, 581-3865 e-mail: keir@math.utah.edu Web page: www.math.utah.edu/~keir
<b>Office Hours:</b>	Hours: M 8-9am, 3-4pm, W 11:30-12:30, 3-4pm F 7:30-9:00am
<b>Text:</b>	<u>Mathematics for Elementary School Teachers 7<sup>th</sup> edition</u> by Musser, Burger, and Peterson <u>Graph paper Fractions Book</u> , download later 4010 – 1 class notes download now
<b>Prerequisite:</b>	Math 1050 with a grade of C or higher

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Teachers need to become familiar with the pleasures of figuring things out, as well as with the concomitant experiences of confusion and frustration, tolerating their discomfort long enough for things to fall into place. If teachers never learn what this experience feels like, they won't have the gumption to allow their students to go through it either.

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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 preservice 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 preservice 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.

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### Course Work and Grading

Assignments, POWs, portfolio, participation	20%
Midterms (2)	40%
Practicum Report	15%
<u>Final Exam</u>	<u>25%</u>
Total:	100%

### Notes

- 1. 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 at the beginning of class. 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 should be done on lined paper or graph paper written on one side only, 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. You will also compile a **Math Dictionary**. A weekly **POW** (Problem Of the Week) will be given and due on Monday.

2. **Portfolio:** The portfolio is a way to organize your work for the semester. It will count as two assignments. You will come in for a portfolio interview the last week of class. It should be well organized and have a table of contents. A more detailed description will follow.
3. **Participation:** Your presence and participation in the class activities and discussions are important for your own learning and the learning of others. You should arrive on time, be prepared, be a collaborative participant and not leave early. **It's professional!**
4. **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.
5. **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 be sure to complete your observations by November 13, the end of the 7th week of classes. 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 **Nov. 30** and will be discussed in detail in class. More details will follow concerning the written report.
6. **Final Exam:** The comprehensive final exam will be on the date listed below.
7. **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. **Course Focus:** There's a lot of truth in the statement, "Knowing math for oneself isn't the same as knowing math in order to teach." According to Liping Ma, a master teacher from China, "A teacher with Profound Understanding of Fundamental Mathematics (PUFM) is aware of the simple but powerful basic ideas of mathematics and tends to visit and reinforce them. He or she has a fundamental understanding of the whole elementary mathematics curriculum, thus is ready to exploit an opportunity to review concepts that students have previously studied or to lay the groundwork for a concept to be studied later." The goal of Math 4010 is to develop a deeper understanding of the mathematics of the Real Number System and learn to effectively communicate this to children.
8. 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.
9. **Calculators:** Calculators will not be allowed on exams.

<b>DATES:</b>	
Labor Day	Mon., 9/7
Last day to drop	Wed., 9/2
Fall Break	Oct. 12-16
Last day to withdraw	Fri., 10/23
Thanksgiving	Nov 26, 27
Last Class	Fri., 12/11

<b>EXAMS</b>	
Midterm 1	9/30
Midterm 2	11/11
<b>Final</b>	
Monday	12/14 6:00 – 8:00 pm

