

**MA 201-003: Mathematics for Elementary Educators  
Fall 2010**

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**Office Hours:** MWF 8-9 in 906 POT, and By Appointment  
**Class meets:** TR in CB 343 from 11-12:15  
**Course webpage:** <http://www.ms.uky.edu/~cmonday/>

**Introduction:** This course will provide future elementary educators with the mathematical background needed for teaching elementary school mathematics. The emphasis of the course is on developing conceptual knowledge which is a requirement for effectively communicating mathematics to elementary school students. This is not a pedagogy course! This is an upper level college mathematics course in which you will acquire mathematical skills to use in future education courses.

**Outcomes:** Students who successfully complete MA201/202 will:

- Have a comprehensive knowledge of elementary school mathematics.
- Be able to describe the standard concepts of elementary mathematics in several ways and be familiar with various mathematical modeling techniques.
- Understand and appreciate the importance of mathematics in the elementary school curriculum and effectively advocate mathematics to students.

**Motivation:** You graduated from elementary school, so why do you need to take this course? This course is not a repeat of elementary school mathematics. You will learn the same concepts, but on a much deeper level; and this will help you effectively explain mathematics to your future students. For example, rather than being able to correctly add two fractions, you will know several models to aid in the teaching of adding fractions and explain why they work.

In order to effectively teach mathematics at any level:

- Your mathematical understanding of the concepts you teach must be much deeper than the procedural level. You must be able to explain why and how mathematics works.

- You need to be familiar with many ways of describing and modeling mathematical concepts.
- You must have the ability to understand students' difficulties and have the flexibility to accommodate individual student learning styles.

**Attendance:** Attendance for this course will be recorded periodically, but will not contribute to your grade.

However, it is impossible to do well in this course without regular attendance. There is a participation component to your grade, and if you are not in class, you cannot participate.

Students are expected to attend class, and are fully responsible for anything said or done in class. Thus, attendance is defined as more than just being in the room. (See Expectations.)

**Classroom Policies:** Cellphones and other electronic devices should be set to silent (not vibrate) and should not disrupt class in any fashion. If you expect an urgent phone call, please inform me before class. I do not allow texting inside of the classroom. Please also familiarize yourself with the rules in the University of Kentucky Student Rights and Responsibilities handbook, as they will be upheld. (<http://www.uky.edu/StudentAffairs/Code/>)

**Expectations:** Students should come to class fully prepared to participate. This includes bringing your textbook if you need it, something to write with and on, and anything else you might need. Students are expected to participate in all activities presented and to treat everyone in the classroom with respect. Students are expected to ask questions when they don't understand something. Students are expected not to cheat in any way. (See the above link for more information on cheating/plagiarism.) The instructor reserves the right to ask inattentive and disruptive students to leave. In return, the instructor will answer your questions to the best of her ability, will attempt to make the best use of class time, will respond to email questions in a timely manner, and will be available for questions outside of class.

**Homework:** Mathematics requires practice. You will submit weekly homework assignments to practice and demonstrate what you learn in class. Homeworks

will be announced each Tuesday and collected the following Tuesday. No late homework will be accepted for any reason. Homeworks will be graded based on completeness and correctness. You are allowed to work with others on your homework, but should write up your solutions on your own. Even though this is not an English course, I do expect "good" grammar. No "text-speak" please.

**Presentation:** You will give an in-class presentation this semester to practice effectively communicating mathematics. The list of possible presentation topics will be taken from Chapter 5. You will be notified at least three weeks before presentations begin. I will be taking attendance during all presentations.

**Exams:** You will complete three in-class exams this semester, as well as one final exam. I will provide an exam guide before each exam. If you need a make-up or alternate exam, please follow university policy to obtain one.

**Participation:** This class is very interactive. I expect you to participate by (a) engaging in group activities, (b) asking and answering questions, (c) being present. 5% of your grade will reflect your participation based on (a)-(c).

**Grading:** The breakdown of your course grade is as follows:

Homework:	10%
Presentation:	15%
Participation:	5%
3 Exams:	45% (15% each)
Final:	25%

**Disabilities:** If you have a documented disability, I will be happy to provide you with reasonable accommodations. Please discuss this with me within the first two weeks of class.

**How to Succeed:** This course is challenging for some students. If you find you are struggling, try the following:

- Come to my office hours and email me if you have questions.
- Read the book and study your notes.
- Form a study group.
- Make a study plan.
- Ask me for help!

**Tentative Schedule:**

<b>Date</b>	<b>Activity</b>	<b>Date</b>	<b>Activity</b>
Thur 8/26	1.1-1.2	Tues 10/19	4.1
Tues 8/31	1.3	Thur 10/21	4.2
Thur 9/2	1.4	Tues 10/26	4.3
Tues 9/7	1.5	Thur 10/28	Review
Thur 9/9	1.6	Tues 11/2	Exam II
Tues 9/14	2.1	Thur 11/4	Presentations
Thur 9/16	2.2	Tues 11/9	Presentations
Tues 9/21	2.3	Thur 11/11	6.1
Thur 9/23	Review	Tues 11/16	6.2
Tues 9/28	Exam I	Thur 11/18	6.3
Thur 9/30	2.4	Tues 11/23	6.4
Tues 10/5	2.4	Thur 11/25	No Class
Thur 10/7	3.2	Tues 11/30	Review
Tues 10/12	3.3	Thur 12/2	Exam III
Thur 10/14	3.4	Tue/Thu 12/7&9	7.1 & 7.2

**Final Exam:** Your final exam is Thursday, December 16 at 10:30am in CB343.

If you are ever struggling with the material, please let me know as soon as possible. I am available and more than willing to help. The best way to reach me is via email.

Casey Monday

Monday, August 23, 2010