

**MA 202 – Mathematics for Elementary Teachers**

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**Office Hours:** MTR 2:00-3:00 p.m. and by appointment

**Course Meetings:** TR 8:00–9:15 a.m. CB 343 (section 001)  
TR 9:30–10:45 a.m. CB 343 (section 002)

**Course Description**

Algebraic reasoning, introduction to statistics and probability, geometry, and measurement. We will cover most of chapters 9-16 in the textbook.

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. We will concentrate on the *why* more than the *how*. 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.

**Student Learning Outcomes**

Students who successfully complete MA 201 and MA 202 should:

- Have a comprehensive knowledge of elementary school mathematics and an understanding of the material that is deeper than the procedural level
- 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

**Canvas**

Canvas will serve as the primary tool for announcements, information, course materials, and grades. Students are encouraged to check Canvas regularly.

**Email Policy**

I will generally reply to emails and Canvas messages within 24 hours on days during which class is in session, and within 48 hours anytime else. Do not expect replies to questions about assignments if you wait to contact me until shortly before they are due.

## Required Materials

The textbook for the course is *Mathematical Practices, Mathematics for Teachers* by Ron Larson and Robyn Silbey. WebAssign access is required, since most homework for this course will be online. The textbook and WebAssign access can be purchased individually, but it is recommended that you purchase access to Cengage Unlimited, which is essentially the same price and provides access to materials for all courses through Cengage.

## Grading

The grading weights and letter grade cutoffs will be as follows:

Exams	60%	A	90%–100%
WebAssign Homework	20%	B	80%–90%
Quizzes	5%	C	70%–80%
Reflection Papers	5%	D	60%–70%
Review Presentation	5%	E	0%–60%
Attendance/Participation	5%		

## Attendance and Participation

Attendance and active participation in class activities are required and will factor into your final grade. The list of excused absences includes illness, death of a family member, trips organized by the university, and religious holidays. If you need to miss a class, let me know by email and send me the appropriate documentation as soon as possible. If you miss a class, it is your responsibility to find out what you missed and to arrange to make up any graded activities or quizzes.

## Homework and Quizzes

Most of the homework for this course will be online through WebAssign, which can be accessed via the Modules page in Canvas. WebAssign homeworks will usually be due twice weekly; the assignments and due dates will be posted in Canvas. Homework assignments will not be accepted late.

There will be several reflection papers throughout the semester, asking you to reflect on a given topic, reading, or set of questions. These reflections will be about one to two pages, typed and double-spaced. They will be announced in class and posted on Canvas.

There also will be short quizzes roughly once per week, based on the homework that is due that day or recent class meetings. These quizzes will be graded for accuracy and provide you with feedback necessary for the successful completion of exams. Quizzes missed due to an unexcused absence cannot be made up.

## Review Presentation

Small groups of about three members will give short presentations on exam review days of an activity that covers a portion of the material for the upcoming exam. Each student will present once during the semester. These presentations should last 10-15 minutes per group. They will be graded and will provide you a chance to practice effectively teaching and communicating mathematics. You will also submit a short one page self-reflection, discussing how you think your group presentation went, how it may have been improved, and

how you think the class reacted. Reflections are due one week after the presentation. The group presentation activity and the self-reflection will each contribute half of your presentation grade. Further details about presentations will be given within the first weeks of class.

## Exams

There will be three exams during the semester and a final exam. The exams will be held during class time, and the tentative dates are:

Exam 1 Thursday, Feb. 7  
Exam 2 Thursday, Mar. 7  
Exam 3 Thursday, Apr. 11

If you must be absent on one of the exam dates, inform the instructor as soon as possible so that other arrangements can be made. The date and time of the final exam:

Section 001 Wednesday, May 1 10:30 a.m.–12:30 p.m.  
Section 002 Tuesday, Apr. 30 8:00 a.m.–10:00 a.m.

The four exams will count equally toward your final grade. The final exam will be cumulative with an emphasis on the material covered after Exam 3.

## Classroom Expectations

All students are expected to behave in a manner conducive to an atmosphere of learning. This includes, but is not limited to, being courteous and respectful to other students and the instructor, being an active participant in class activities, arriving to class on time, and refraining from any behavior that may distract or disturb other students.

The use of electronic devices during class is strictly prohibited. Cell phones, laptops, tablets, and other devices should be silenced and kept out of sight. Calculators may not be used unless otherwise specified by the instructor. Anyone seen using such a device will be asked to put it away, and repeated violations of this policy may result in a penalty to the in-class participation score for that day.

Video and audio recordings are not permitted during class unless the student has received prior permission from the instructor.

## Tips for Success

- Math is not a spectator sport; the only way of really learning math is by doing math.
- If you are struggling with the material, ask for help. Visit my office hours or the Mathskeller.
- Work with other students outside of class, both on the homework and to review the material. Form study groups with students in your section or find students from other sections in the Mathskeller.
- Ask questions in class. If you're wondering about something, chances are someone else has the exact same question.
- Doing math often feels like a struggle. This is perfectly normal; it means that you're learning!

### **Course Coordinator**

You are encouraged to bring any concerns about the course to the instructor. However, if this is not possible or does not produce a satisfactory outcome, you may contact the course coordinator, Dr. Katherine Paullin (katherine.paullin@uky.edu).

### **Academic Integrity**

While you are encouraged to work with other students and receive help from tutoring resources on homework assignments, any work you submit for a grade must be your own, with the exception of assignments that are specifically designated as group assignments. Academic dishonesty will not be tolerated. This includes, but is not limited to, copying another student's work and present it as your own, allowing another student to copy your work, modifying an assignment or exam after it has been handed back in an attempt to deceive the instructor into believing it was graded incorrectly, or using outside resources (classmates, notes, electronic devices, etc.) during a quiz or exam. Any instance of academic dishonesty will result in an automatic zero on the assignment, and in some cases the offense may result in an E in the course or further consequences. Refer to <http://www.uky.edu/ombud/> for more information on academic integrity.

### **Accommodations Due to Disability**

If you have a documented disability that requires academic accommodations, please see the instructor as soon as possible. In order to receive accommodations in this course, you must provide the instructor with a Letter of Accommodation from the Disability Resource Center (DRC). The DRC coordinates campus disability services available to students with disabilities. It is located on the corner of Rose Street and Huguelet Drive in the Multidisciplinary Science Building, Suite 407. You can reach them via phone at (859) 257-2754 and via email at [drc@uky.edu](mailto:drc@uky.edu). Their web address is <http://www.uky.edu/DisabilityResourceCenter/>.

### **UK Mathematics Department Professional Themes**

This course will address the four themes of the conceptual framework for the UK professional education program: research, reflection, learning and leading. Students will engage with fundamental ideas in mathematical research, reflection on and analyzing core mathematical content that arise throughout mathematics at all levels. Students will develop as life-long mathematical learners who will be able to take active leadership roles in their future roles as professionals and citizens. The goal in addressing these four themes is to produce teacher leaders who work together to improve student learning among diverse populations and improve education in Kentucky and beyond.

### **Unbridled Learning Initiatives and the Kentucky Core Academic Standards**

This course will provide students an opportunity to advance their knowledge and mastery of the tools associated with Kentucky education reform, focusing on the content and practice standards outlined in the Kentucky Core Academic Standards. As students carry out projects and complete assignments that involve mathematical content underlying instructional activities for P-12 students in Kentucky schools, they will address one or more components of the Unbridled Learning Initiatives.