

Syllabus for MTH 202 - Section 3

Elementary Mathematics for Teachers II

Tyler Bongers

General Course Information

- Class Times / Location: MWF 3-3:50, A230 Wells Hall
- Course Website: <http://www.math.msu.edu/~charlesb>.

Instructor Contact Information

- Email: bongerst@msu.edu.
- Office: C538 Wells Hall.
- Office Hours: Monday, 1:30-2:30 pm, or by appointment.

Textbook

We will be using a main textbook and six actual elementary and middle school books:

- Elementary Geometry for Teachers, by Thomas H. Parker and Scott Baldridge.
- Primary Mathematics textbooks (U.S. Edition): 3B, 4A, 5A, 5B, and 6B. (Note: 4A and 5A were already used in MTH 201). Many problems from these books are assigned as homework in our main textbook.
- New Elementary Mathematics: New Elementary Mathematics 1, a textbook for Grade 7.

Tools

You will need a compass set for the course. This set should include: (i) a reliable compass, (ii) a setsquare, (iii) a 6" ruler (with both inch and cm markings), and (iv) a 3" protractor.

Prerequisites

MTH 201 and a declared major in the Elementary Teaching Certification Program.

Goals

MTH 201-202 is a series of mathematics courses focused on the mathematics needed for K-8 teaching. While MTH 201 focused on arithmetic and algebra, MTH 202 focuses mostly on geometry and measurement. The main goals are:

- (i) to acquire a solid knowledge of this material, enabling prospective teachers to quickly solve any related K-8 problem,

- (ii) to understand the levels of this content elementary school students need to learn before and after each K-8 grade.

In addition, we will discuss Teacher Knowledge, including:

- (i) how to present the material in simple, clear ways,
- (ii) the appropriate sequential order for developing mathematics skills,
- (iii) what the students will find difficult and what errors they are likely to make,
- (iv) how each topic helps advance the mathematical level of the students.

Expectations

Classes will be primarily lectures, with problem solving individually and in small groups. You are expected to take complete notes, to participate in class activities, and to ask questions about what you do not understand. You are required to have two separate notebooks, one for lecture notes, and one for homework. Attendance will be taken daily and homework will be checked weekly.

Grading

There will be two 50-minute exams each worth 100 points and a 200 point uniform comprehensive final exam. Additionally, there will be 10 quizzes worth 25 points each, of which only the highest eight will be counted; this gives a total of 600 points. Your grade will be given according to the following scale:

Percentage	Grade	Percentage	Grade
90-100	4.0	70-74	2.0
85-89	3.5	65-69	1.5
80-84	3.0	60-64	1.0
75-79	2.5	0-59	0.0

This scale will not be curved. However, participation, attendance, and performance trends will be considered for borderline grades. Hence, grades are based on knowledge and understanding, not upon comparison with other students.

Homework

There are homework sets at the end of each section in the course pack, Elementary Geometry for Teachers. You are expected to work on all of the problems in these homework sets, as the sections are covered. Approximately one section will be covered each day, hence you will work on (roughly) 3 homework sets per week. It is suggested that you write solutions to all of the problems for that section and bring your completed homework to the next class with any questions. You should plan on spending at least two hours on homework for each class meeting. You are encouraged to work in groups as some problems may be difficult. Start early, form study groups, and explain the solutions to one another when working together. While homework will not be graded, the quizzes and exams will be modeled after the homework so it is highly recommended that you do every problem.

Attendance

- Lectures: You are expected to attend all class meetings. If you must miss a class, acquire the notes from a classmate.

- Exams: Missing an exam without an advance valid excuse presented to the instructor will result in a score of zero points. Commercial or vacation travel schedules are not valid excuses. No make-up exams will be given.
- Quizzes: There will be no make-up or excused quizzes, since only the highest eight will count.
- Final Exam: Any student having another final scheduled during the time of the MTH 202 final, or having two other final exams scheduled that same day, may take the make-up final exam, which will be given the next day. If you qualify for the make-up final, you must fill out a request in C212 Wells Hall no later than Friday, 11 December, and provide a recent copy of your schedule as documentation. You will not be allowed to take the make-up final without registering. Students taking the make-up final exam must have a picture ID.

Calculators

Calculators are not allowed throughout the course, since the problems are designed to be solved without calculators, and Teacher Knowledge includes the arithmetic skills needed in Elementary School (as seen in MTH 201).

Academic Honesty

MSU's policy concerning academic integrity is covered in the Spartan Life booklet, under General Student Regulations. In particular, it states, "... no student shall claim or submit the work of another as one's own." A score of zero will be awarded for any work which is copied or otherwise submitted under false pretenses. For more information about this and other scholarship issues, please consult the handbook or visit the Spartan Life website at <http://splife.studentlife.msu.edu>.

Cheating on any exam or quiz will not be tolerated, and will result (at a *minimum*) in a score of 0 for that assignment. Such academic misconduct must be reported to the university.

Important Dates

- Wednesday 9/2: Classes begin.
- Monday 9/7: Labor Day - University closed.
- Wednesday 9/9: Online open add period ends at 8pm.
- Wednesday 9/16: Last day to late add a course or change sections within a course. Last day to drop to a lower level course.
- Monday 9/28: End of 100% tuition refund.
- Wednesday 10/21: Middle of semester. Last day to drop without grade reported.
- Thursday-Friday 11/26-27: Thanksgiving - University Closed.
- Friday 12/11: Classes end.
- Monday 12/14: Common final exam, 10:00-12:00 (location TBA).

Miscellaneous

The Math Learning Center will be open during the fall semester for tutoring in MTH 202. For schedule and locations, see their website at www.math.msu.edu/mlc. Any changes to the syllabus will be announced in class.