

Prerequisites: Grade of C or higher in MA 150

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Office Hours: M, R, F 10:30 – 12:00; T 2:00 – 3:00; W 1:30 – 3:00; other times by appointment

Course Overview: This is the second course in the mathematics sequence for prospective elementary school teachers. The focus this semester is on geometry, measurement, statistics, and probability. The goal of the course is to examine topics of elementary mathematics from an advanced standpoint with emphasis on conceptual understanding as well as mathematical proficiency.

The following material outlines your responsibilities and expectations for this course. Read it carefully.

Required Materials:

- **Text:** Bassarear. *Mathematics for Elementary School Teachers*. (Text and companion *Explorations* book). Fourth edition, 2008. (These are the same two books used in MA 150.)
NOTE: We will frequently discuss examples, problems, and explorations from the text, so you should **bring your books to class with you every day**.
- **Calculator:** You should have a calculator with you at all times. Minimum features that your calculator should have are a square-root key and the ability to add, subtract, and store numbers in memory. More-sophisticated calculators are both acceptable and encouraged.
- **Mathematics “tool kit”:** There are a number of tools of the mathematical trade that you will need to use frequently. Gather the items listed below into a kit that you **bring to class with you every day**. You will also need these things when you are studying, working on problems, and taking tests. Include the following items in your tool kit:
 - ruler marked in both inches and centimeters
 - protractor (for measuring angles)
 - compass (for drawing circles)
 - scissors (for cutting paper)
 - colored pencils
 - eraser
- **Paper:** For various activities, you will need:
 - Graph paper (also called grid paper). Graph paper is readily available wherever you get school supplies.
 - Dot paper. There are templates for two kinds of geoboard dot paper in the “cutouts section” of your explorations book. DO NOT write on those pages. Rather, use them as masters to make photocopies of dot paper for class use.
 - Plain, unlined paper will be needed for some activities, especially during the geometry unit.
 - You also may find it convenient to have a supply of scrap paper (clean on one side) to use for various paper-folding and paper-cutting activities.
- **Manipulatives:** There are a number of manipulatives that we will use for various hands-on activities, and some of these you will be expected to make for yourself. Directions will be given in class.

Course Requirements and Expectations:

- Attend every class and participate actively in class discussions and activities. Roll will be taken daily, and absences or late arrivals will negatively impact your grade.

- Complete all assignments on time. Homework assignments will be recorded. Selected assignments or parts of assignments will be graded. Missed or late assignments will not be credited.
- Read and study all of the assigned material. You will be responsible for material covered in assigned readings, even if it is not directly addressed in class. If you do not understand something in the reading, it is your responsibility to ask questions and get clarification. Questions are always welcome in class as well as in the office. Material from assigned readings will be included on quizzes and tests.
- Learn to read with pencil and paper in hand. As you read the book, you will find questions and problems interspersed throughout the text (usually marked with a pencil icon). When you encounter these, you should cover the answer and take the time to think about and solve the problem yourself before moving ahead. Answers are given, and it may be tempting to simply read the question and the answer/explanation, but you will never know if you truly understand the concepts unless you first reflect on and answer the question yourself, before comparing your solution to the given one.
- Working with other students and discussing the ideas with them can be very beneficial. Even though you are required to write your own solutions in your own words when completing assignments, you are also encouraged to study and discuss ideas with others. Much can be learned from explaining ideas to a peer.
- When writing up homework problems, it is essential that you give complete explanations and explain your thinking (how you got the answer). A “naked answer” (like “12” or “rectangle”) will not receive credit. Acceptable responses will be of the form “the answer is _____ **because** . . .”

Assessment: Assessment of your progress will take place through graded assignments, quizzes, tests, examinations, and class participation.

Quizzes may be given at any time and will usually be unannounced. Missed quizzes cannot be made up. The lowest quiz score will be eliminated from the final grade; all other quizzes will be counted. (Quizzes will likely total about 100–150 points.)

Mid-term exam will be given on **Friday, February 27**. This is the last class before the semester break. There will be **NO DEVIATIONS** to this schedule. The mid-term exam will be over all of the geometry and measurement material covered to that date. (Mid-term exam: 100 points.)

Final exam will be given according to the published NMU exam schedule (Wednesday, April 29, 8:00–9:50). It will be a comprehensive exam covering the entire course. (Final exam: 200 points.)

Two other tests will be given, one before the mid-term exam and one between the mid-term and final. Dates and further details will be given in class approximately one week before the respective tests. (These tests: 100 points each.)

Homework assignments will be recorded. Selected assignments or parts of assignments will be graded. Missed or late assignments will not be credited. The lowest homework grade will be eliminated from the final grade; all others will be counted. (Homework will likely total 100–200 points.)

Class attendance and active class participation will be weighed into the final grade. (A maximum of 100 points can be earned for perfect attendance and active class participation. Points will be deducted for classes missed, for late arrivals, and for lack of participation.)

Grading: Points will be assigned for quizzes, tests and examinations, homework, and class participation. Your grade will be determined by the percentage of the total possible points that you earn, as follows:

A = 93-100%; A– = 90-92%; B+ = 88-89%; B = 83-87%; B– = 80-82%; C+ = 78-79%; C = 73-77%; C– = 70-72%; D = 60-69%; F = below 60%

mailing disserv@nmu.edu. Reasonable and effective accommodations and services will be provided to students if requests are made in a timely manner, with appropriate documentation, in accordance with federal, state, and University guidelines.