

MA 151 - Mathematics for the Elementary School Teacher II

Winter Semester, 2008

M-W-R-F 10:00-10:50

WS 3616

Prerequisites: Successful completion of MA 150 (Grade of C or better)

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Office Hours: M-W-R-F 11:00-12:00 and by appointment.

Course Overview:

This course is an extension of MA 150 and is likewise designed to examine elementary school mathematics from an advanced standpoint. The emphasis is on probability, statistics, geometry and the language, models, concepts, and operations associated with these topics. 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.

Required Materials:

- **Text:**

Tom Bassarear. *Mathematics for Elementary School Teachers*. Fourth edition, 2008, and Tom Bassarear, *Mathematics for Elementary School Teachers: Explorations*. Fourth edition, 2008.
- **Calculator:**

You must 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 mathematics 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 degrees)
 - compass (for drawing circles)
 - scissors
 - colored pencils
 - eraser
 - template for drawing right triangles (OPTIONAL)
- **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.
- **Paper:**

For various activities, you will need graph paper (also called grid paper) and/or dot paper. Graph paper is readily available wherever you get school supplies. In class you will be given templates for dot paper that you can copy. 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.

Student Responsibilities:

- Attend every class and participate actively in class discussions and activities. Roll will be taken daily, and absences will negatively impact your grade. The in-class activities are essential for developing a deeper mathematical understanding which is not developed by just reading the text.
- Do all reading and problem assignments – both those to be turned in and those recommended (you will be responsible for concepts, conventions, and language presented in both types of assignments **even if not covered directly in class**). If you do not understand something in the reading, it is your responsibility to ask questions and get clarification.
- Allocate study time. Studying involves more than merely doing assignments. You should also spend time outside of class thinking about lectures and in-class activities. What made sense? What didn't? Is what's true for this case also true for another case? You should work the example problems presented throughout the text. 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, and compare your solution to the text's.
- Work with other members of the class. While you will turn in individual assignments, working with others and discussing the ideas with them can be very beneficial.
- When writing up homework problems, it is essential that you give complete explanations and explain your thinking (how you got the answer).

Assessment:

Assessment of your progress will take place through grades assignments, quizzes, tests, final examination, and class participation.

- **Quizzes:** 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 others will be counted. Quizzes will be counted as a percent and will total 100 points.
- **Tests:** Chapter test will be worth 100 points each (based on %) for a total of 400 points. Dates will be given approximately one week before the respective tests. **A make-up for a missed test will be given only under exceptional circumstances and with my prior approval.**
- **Homework/Projects:** 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 200 points.
- **Class attendance and active class participation:** These will be weighed into the final grade. A total 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.
- **Final Examination:** The final examination is scheduled for Thursday, May 1 at 10:00 am. It will be a comprehensive final and will count 200 points.

Grading Scale:

A	93-100%	A-	90-92%	B+	87-89%	B	83-86%
B-	80-82%	C+	77-79%	C	73-76%	C-	70-72%
D+	67-69%	D	63-66%	D-	60-62%	F	<60%

Disability Services

If you have a need for disability-related accommodations or services, please inform the Coordinator of Disability Services in the Disability Services Office by: coming into the office at 2001 C. B. Hedgcock; calling 227-1700; or e-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