MATH 151
Mathematics for Elementary Teachers
Winter 2016

DESCRIPTION
To investigate the concepts which underlie the mathematics encountered in the elementary classroom and the method to which it is delivered.

INSTRUCTOR: Dr. David Buhl

CLASS: 9:00 - 10:00 West Science 3806

OFFICE: Jamrich 2220

OFFICE HOURS:
10:00 – 12:00 M, W, F
or by appointment (contact via email or phone)

PHONE: 227-2089
EMAIL: dbuhl@nmu.edu

EVALUATION: (Tentative)

We are tentatively scheduled for three exams (each worth 100 pts), quizzes (total 100 pts), and a final (150 pts). You will also be graded on attendance. We will follow the 90/80/70/60 percent for the grading over total possible pts.

GRADING (Percent)
100 - 90 A (-)
89 - 80 B (+ or -)
79 - 70 C (+ or -)
69 - 60 D (+ or -)

ATTENDANCE IN CLASS IS REQUIRED. There are no make-up quizzes or exams due to absences. Attendance will be worth 50 pts of your grade. I will not take attendance every day. Your pts will be calculated by # days present/# days attendance is taken multiplied by 50 pts.

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 at 2001 C. B. Hedgcock (227-1700). 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. Student Learning Outcomes for MA 151, Mathematics for Elementary Teachers (II)

Upon successful completion of this course, the student should be able to:

1. Identify and categorize plane and three - dimensional figures, based on their properties.

2. Apply logical arguments and formal proofs through the use of inductive and deductive reasoning.

3. Use the definitions of congruency and similarity to compare and contrast pairs of objects.

4. Combine and apply different types of transformations to a geometric figure and predict the result.

5. Develop proficiency in using both the metric and English systems of measurement, and be able to convert between the two.

6. Concretely examine perimeter and area and solve problems involving these properties.

7. Concretely examine the concepts of surface area and volume of three-dimensional objects and solve problems involving them

8. Use the Pythagorean Theorem discovered in the study of right triangles to develop the distance and midpoint formulas. Apply these formulas to find the lengths of objects superimposed on a coordinate system.

10. Demonstrate an understanding of experimental probability and apply the concepts of theoretical probability and simulation to the design and solution of probability problems.

11. Make and use various statistical graphs to describe and summarize data.

12. Examine the clustering and dispersion of data and relate these to the "normal" distribution.

13. Solve problems in probability and statistics.

Evaluation of these learning outcomes will be measured through:

i. In - class group work

ii. Homework assignments and

iii. Exams