

■ **Course Outline of Grading**

-- MA 1423 Online
-- Online MA 1423 Problem Solving
(Math For Teachers 2) -- Course Syllabus
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Welcome to Problem Solving online. This course consists of online homework, quizzes, a midterm and a final exam. The midterm and final are proctored and can be taken wherever you are or in Memorial Hall of the Mississippi State campus. These tests are traditional pencil and paper. If you are not near the MSU campus you can get an approved proctor in your community to give you the tests. (Contact Betty McCoy at the MSU continuing education office 662-325-2652)

Your grade in this course will be determined as follows:

Homework 20% of final grade
Quizzes 20% of final grade
Midterm 30% of final grade
Final 30% of final grade

Grading Scale:

90-100% A
80-89 B
70-79 C
60-69 D
Below 60 F

- **Course Syllabus**
-- Course Syllabus
Credit: 3 semester hours

Catalog Description: Three hours lecture. Problem solving, proportions, percent problems, probability, counting principles, statistics.

Conceptual Framework: This course is designed to give pre-service elementary school teachers a basic knowledge and understanding of solving problems involving real numbers.

Instructional Objectives:

The student will be able to demonstrate a basic knowledge of symbolic logic.

The student will be able to solve mathematical problems through logical reasoning.

The student will be able to understand and use proportional reasoning to solve problems.

The student will be able to solve problems involving percents.

The student will be able to solve basic problems that involve real numbers.

The student will be able to compute basic probabilities and see the relationship to rational numbers.

The student will be able to use the language of mathematics to develop problems which model concepts and operations involving real numbers.

The student will be able to use basic counting principles.

The student will be able to graphically display basic statistical facts about a data set.

The student will be able to compute basic statistical measures.

The student will be able to use and apply statistical measures.

The student will be able to use the normal distribution curve.

Topics To Be Covered: (not necessarily in this order)

1. Logic – 8 hours
 - a. Determining the truth value of simple and compound statements
 - b. Determining the validity of an argument
 - c. Problem Solving through logical reasoning
2. Real Numbers – 8 hours
 - a. Proportional reasoning
 - b. Percents
3. Probability – 13 hours
 - a. Determine basic probability
 - b. Multiple stage experiments with probability
 - c. Conditional probability
 - d. Probability trees
 - e. Methods of counting
4. Statistics – 16 hours
 - a. Interpreting and creating statistical graphs
 - b. Calculating and using measures of central tendency and variation
 - c. Using and interpreting normal distribution

Midterm and Final Exams

The midterm and final exams for this course are NOT in MY MATH LAB. These are multiple choice tests like the questions in MML, but they are pencil and paper tests. If you are on the Mississippi State Campus you will take the test at Memorial Hall. If you are not at MSU your approved proctor will have to request the exams from AOCE, particularly Betty McCoy at bmccoy@aoce.msstate.edu or 662-325-2652 or Jane Maddox at jmaddox@aoce.msstate.edu or 662-325-8382.

The midterm exam covers material from chapters 1 and 8. You may take the test after you have finished the homework and quizzes from these chapters.

The final exams covers all material from chapters 9 and 7. You may take the test after you have finished the homework and quizzes from these chapters.