

*Montgomery College - Department of Mathematics
Rockville Campus*

**MA132 – Elements of Mathematics III : Probability,
Statistics, and Problem Solving
4 Semester Hours**

Description

This course covers descriptive statistics, sampling, standardized tests, basic probability, counting techniques, expectations, and problem solving in a variety of settings. Intended for elementary education majors, this course is also suitable for parents of school-age children.

MA132 meets 4 hours each week.

Prerequisites

A grade of C or better in MA 131 or consent of department.

Topics

- I. Statistics
 1. Representing Data
 2. Measures of the Center
 3. Measuring Spread
 4. Sampling
 5. Standardized Tests
- II. Probability
 1. Experimental and Theoretical Probability
 2. Simulations
 3. Counting
 4. Independent and Dependent Events
 5. Expected Value
- III. Problem Solving Strategies
- IV. Topics in Problem Solving
 1. Patterns
 2. Number Theory
 3. Geometry and Measurement
 4. Deductive Reasoning

Text

Mathematics for Elementary Teachers: An Interactive Approach, for Grades K-8 (3rd Edition), Sonnabend, Brooks Cole, 2004.

and

Creative Problem Solving in School Mathematics by Lenchner, Glenwood, 1983.