

*Montgomery College - Department of Mathematics
Rockville Campus*

**MA131 – Elements of Mathematics II : Geometry and
Algebra
4 Semester Hours**

Description

This course covers proportions, percents, and real numbers; basic geometry that includes congruence, similarity, symmetry, and transformations; measurement and coordinate geometry; and algebra emphasizing multiple representations. Intended for elementary education majors, the course is also suitable for parents of school-age children.

MA131 meets 4 hours each week.

Prerequisites

A grade of C or better in MA 130 or consent of department.

Topics

- I. Proportions and Real Numbers
 1. Ratio and Proportion
 2. Percents
 3. Irrational and Real Numbers
- II. Introductory Geometry
 1. Points, Lines, Planes
 2. Polygons
 3. Solid Figures
- III. Congruence, Symmetry, and Similarity
 1. Transformations and Congruence
 2. Constructions and Congruence
 3. Symmetry
 4. Similarity and Dilations
- IV. Measurement
 1. Metric and Customary Systems
 2. Perimeter and Area
 3. Pythagorean Theorem
 4. Surface Area and Volume

- V. Algebra and Coordinate Geometry
 - 1. Multiple Representations of Functions
 - 2. Problem Solving
 - 3. Coordinate Geometry

Text

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