



Catalog Description:

Geometry for middle school teachers.

Purpose of Course:

The purpose of the course is to prepare teachers of middle school students. In particular, it intends to deepen and extend the prospective teachers' content knowledge of the mathematics they will teach as well as their ability to reason with and communicate that knowledge.

Prerequisite:

C- or better in 1165, and enrollment in Middle Childhood Education major with Math as an Area of Concentration.

Follow-up Courses:

Math 2167 and Math 2168

Text:

Course Notes.

Topics List:

1. Visual reasoning via “proofs without words.” Measurement (also teaching measurement in middle school)
2. Geometric constructions, congruence, similarity, and problem solving.
3. Coordinate geometry with emphasis on solving equations.
4. Non-Euclidean geometries.
5. Geometric transformations coordinate geometry, complex numbers.
6. Scaling and relationship between perimeter and area.
7. Measurement issues.
8. Modeling real-world situations.