

1023-97-1501 **Charlene E. Beckmann*** (beckmannc21@aol.com), 3680 Dunecrest Drive, Muskegon, MI 49441.
Enhancing the Teaching of Euclidean Geometry.

Reports from USA agencies and professional organizations raise concerns about the preparation of mathematics teachers, indicating the need for preteachers to develop a deeper understanding of the mathematics they will teach. Mathematics departments face designing courses that maintain high levels of mathematical content for all majors while bridging this content to the mathematics preteachers will teach. To address issues, mathematicians and mathematics educators worked together to change core mathematics courses by creating college-level activities to explore and extend the content of exemplary NCTM Standards-based K-12 materials. Utilizing K-12 materials reminds preteachers where they have encountered mathematical concepts before. Concepts are set in familiar real-world or concrete settings; studying concrete examples and connecting students' knowledge to previously learned ideas expands and deepens students' understanding of more abstract concepts. Preteachers are exposed to concepts studied in K-12 mathematics classrooms and realize the need for deep personal mathematical understanding in order to effectively teach these concepts. We will provide an overview of our work and share our progress in the Euclidean Geometry course. (Received September 26, 2006)