COURSE DESCRIPTION: This course provides an introduction to research on learning and teaching middle-school math. The course is intended for undergraduates who are considering becoming math teachers or math tutors or are interested in careers in mathematics education (curriculum or technology development, research, etc.). Students will explore research in math education including different perspectives on math learning and teaching, and their own beliefs about learning and teaching math.

The course is designed for students who enjoy math (including those with a major or minor in math, physics, engineering, computer science, other physical sciences, etc.).

The course addresses the following issues and questions:

What are different views of learning mathematics? • What are different views of teaching mathematics?
What is mathematical proficiency? • What is conceptual understanding?
What is effective mathematics teaching? • What are principles for teaching math for understanding?
What are equity issues in mathematics classrooms?

This course is part of the Subject Matter Waiver Program for Secondary Mathematics and is an elective in the Minor in Education.

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