

## **MAED 4400: Directed Study in Mathematics Education**

### **1-5 Credit Hours**

*Prerequisite:* Approval of the instructor and department chair.

A concentrated investigation of a particular aspect of a topic within mathematics education. The content of the directed study will be determined jointly by the instructor and the student.

## **MAED 4414: Pedagogical Content Knowledge for Mathematics I**

### **2 Credit Hours**

*Prerequisite:* Admission to Teacher Education, EDUC 2120, MATH 2203, and two of the following three: STAT 2332, MATH 2390 or MATH 3260

*Corequisite:* EDSM 4414

This is the first of three courses in a professional sequence toward becoming a well-prepared beginning secondary mathematics teacher. Topics include introductory ideas about mathematics education, including current mathematics standards and policy documents, cognitive learning theories, and teaching frameworks. Students will explore how secondary students think about and learn mathematics, examine how to select and modify tasks, use appropriate manipulatives and technology, differentiate instruction, and apply their learning in an accompanying field experience.

## **MAED 4416: Pedagogical Content Knowledge for Mathematics II**

### **2 Credit Hours**

*Prerequisite:* MAED 4414

*Corequisite:* MAED 4426

This is the second of three courses in a professional sequence toward becoming a well-prepared beginning secondary mathematics teacher. Topics include social learning theories, equity issues, and specific teaching strategies. Students will explore how to support discourse in the secondary mathematics classroom, develop questioning techniques, examine how to plan for learning sequences, and apply their learning in an accompanying field experience.