MAE: Mathematics: Education Courses

Courses

MAE 3905  Directed Study
1-12 sh (may be repeated indefinitely for credit)

MAE 4310  Teaching Mathematics in the Elementary School
3 sh (may not be repeated for credit)

This course is a requirement for the elementary education teacher preparation program. The course is designed to provide students with the methodology requisite to effective mathematics teaching in elementary school classrooms. The coursework centers on utilizing mathematics content knowledge and process skills in the development of effective instructional strategies for the elementary level learners. This course addresses the Next Generation Sunshine State Standards (Common Core State Standards for Mathematics) within lesson planning assignments. Material and supply fee will be assessed.

MAE 4320  Teaching Mathematics in the Middle and Secondary Schools
3 sh (may not be repeated for credit)

Theory and methods of teaching Mathematics in the middle and secondary schools; explores current research on approaches in teaching and learning mathematics; examines the practice of mathematics, disciplinary core ideas in mathematics, and crosscutting themes in mathematics; compares various models of teaching (i.e. direct instruction, inquiry, project-based learning); Includes practices to effectively move student thinking toward meaningful understanding focusing on best practices in STEM disciplines.

MAE 4657  Mathematics for the 21st Century
3 sh (may not be repeated for credit)
Prerequisite: MAC 2311

Utilizes appropriate technologies for teaching mathematics at the middle and secondary school levels. Offered concurrently with MAE 5658; graduate students will be assigned additional work.

MAE 4905  Directed Study
1-12 sh (may be repeated indefinitely for credit)

MAE 6115C  Teaching Mathematics in Elementary Education
3 sh (may not be repeated for credit)

Analysis and evaluation of new programs and practices in teaching elementary school mathematics, including study of effects of these programs on teaching methods and materials; lab experiences including design, field testing and evaluation of activity-oriented lessons in mathematics and development of competence in the use of teaching aids in mathematics instruction; contemporary approaches to teaching elementary mathematics concepts and problem solving; development of competence in the use of alternative assessment techniques. Material and Supply fee will be assessed.

MAE 6361  Teaching Mathematics in Middle Level and Secondary Education
3 sh (may not be repeated for credit)
Prerequisite: EDM 6944* OR ESE 6944*

The purpose of this course is to assist middle and secondary level teachers to develop theoretical understanding and skills necessary to teach mathematics, that are consistent with current reform efforts in mathematics education. The course focuses on components of understanding mathematics teaching and learning: (1) how students learn mathematics, and (2) the role of the teacher in delivering effective mathematics lessons for general math courses and college preparatory courses. The course provides prospective high school teachers the opportunity to develop concepts, skills, and pedagogical procedures for effective instruction of mathematics. Material and supply fee will be assessed. In-depth knowledge of Mathematics (equivalent to Bachelor’s degree in mathematics) is required before enrolling in this course.

MAE 6905  Directed Study
1-12 sh (may be repeated indefinitely for credit)
* This course may be taken prior to or during the same term.