

## Mathematics for Certified Elementary and Middle School Teachers M.S.

### **Program Rationale:**

The Master of Science in Mathematics provides certified elementary and middle school teachers with additional content and pedagogical knowledge that will make them effective elementary or middle school teachers. (Note: There are two tracks in this program, one focusing on elementary grades and the other on middle grades.)

### **Program Learning Outcomes:**

Students in this program will be expected to:

- deepen their comprehension of mathematics by re-examining, in detail, the mathematics topics taught in elementary or middle school, using topics introduced in the undergraduate program as a basis to build an increased understanding of the underlying mathematical structure;
- develop as reflective practitioners and self-motivated life-long learners who strive for continual improvement in their teaching and seek to facilitate deep student learning;
- understand emerging research on the psychological and intellectual development of children and adolescents and develop their understanding of current research on the teaching and learning of mathematics, trends and issues in mathematics curriculum, and the effective use of technology, data gathering and hands-on methods in the teaching of mathematics;
- acquire skills necessary to conduct research in mathematics education; and
- acquire skills necessary to make creative contributions to the field, such as writing, collecting data, and developing their own curriculum activities.