Course Sequence:

**SEYS 767.3 Developing Algebraic Thinking in the Middle Grades (5-9)**
Developing algebraic thinking is more than simply practicing how to “solve for x.” It involves recognizing patterns, modeling relationships between and among quantities, comparing and analyzing quantitative relationships, variables and functions, and nontraditional, non-routine problem solving. This course will build on these ideas and provide suggestions and methods for developing algebraic thinking in the middle grades.

**SEYS 767.3 Mathematical Initiatives and Methods in the Middle Grades (5-9)**
This course will help introduce and familiarize students with a variety of methods for planning, instruction, discourse, assessment and reflection of mathematics in the middle grades (5 – 9). Students will discuss and implement strategies to help teachers create, facilitate and assess mathematical ideas for all learners. Course activities will provide a basis for the development of competent math teachers, including familiarity with relevant research, sources of information, and instructional assistance. Student will be given opportunities to practice each idea in action.

**SEYS 750 Mathematics in the Junior High or Middle School**
The focus of the course is on the improvement of instruction through the examination of the most current issues concerning mathematics instruction in the middle school and the latest curriculum, instructional strategies, manipulatives, and technologies that can be used to enhance the learning of mathematics for all junior high and middle school students.

**MATH 385 Mathematical Foundations of the Secondary School Curriculum**
Designed to give prospective secondary school mathematics teachers an understanding of the mathematics they will be teaching as well as the history of mathematics. An examination will be made of the thought underlying the secondary curriculum, from a consideration of the nature of mathematics and mathematical thought to the construction of simple mathematical models drawn from secondary school topics.

**SEYS 775 Research Seminar in Mathematics Education**
As a discipline, mathematics education is a very young science. It evolved from the work of psychologists, mathematicians, and educators who, during the early part of the 20th century, formulated hypotheses to be examined and studied in the context of the mathematics classroom. This course will examine two main questions: how does research influence classroom practice, and how does practice influence research? Answers to these questions will help you to become a critical consumer of mathematics education research, and to explore connections between research and practice.
Application Procedure

How to Apply: