



# MASTER OF ARTS IN MATHEMATICS EDUCATION

## UNIVERSITY OF CENTRAL ARKANSAS

### DEPARTMENT OF MATHEMATICS

#### **INTRODUCTION**

The Master of Arts in mathematics education features mathematics courses developed to increase the mathematical content knowledge of secondary teachers and prepare candidates for teaching in the community college or pursuing further graduate studies. The program is designed so that a teacher can complete the required courses by attending two consecutive summers and enrolling in evening courses during the intermittent fall and spring semesters or by attending full-time for a year including both summer terms. For those candidates considering more advanced graduate studies, a thesis option is also available to expose candidates to research methods in mathematics education.

#### **ADMISSION**

To be admitted to the M.A. degree program in mathematics education, the candidate must have a baccalaureate degree from an accredited institution, a minimum GPA of 2.70, and satisfactory scores on the General Test of the GRE.

#### **FINANCIAL AID**

Graduate Teaching Assistantships are available for fall/spring. Each assistantship includes a full-tuition scholarship for nine credit hours per semester during the academic year. In addition, there is a stipend of \$9,000 for nine months. Graduate Assistants are expected to enroll in nine credit hours and work 20 hours per week in the department. Applications for the graduate program and assistantships are available at the UCA's Graduate School website:

<http://www.uca.edu/divisions/academic/graduate/>

#### **APPLICATION DEADLINE**

Applications for Graduate Assistantships should be received by April 1 for fall semester and November 1 for the spring semester. Although applications for admissions can be submitted at any time, students are urged to have a completed application and credentials on file as early as possible.

#### **SPECIFIC REQUIREMENTS**

**All M.A. Graduate Students:** To obtain the M.A. degree in mathematics education, for either the thesis or non-thesis option, a candidate must earn 30 graduate hours in mathematics within six years. For either option, the hours must include Math 6305, Math 6307, Math 6310, Math 6350, Math 6370, and Math 6375. If Probability and Statistics were not accomplished in the undergraduate degree, a candidate must include Math 5371 and Math 5372.

**Thesis Option:** For the thesis option, a candidate must take at least six thesis hours for research. At the end of the thesis hours, a candidate must produce a written thesis and present results.

**Non-Thesis Option:** For the non-thesis option, the remaining hours may be selected from the list of electives and may include courses at the 5000 level with the approval of the candidate's advisor. All non-thesis option candidates for the M.A. degree will be required to pass three comprehensive examinations in courses selected from their program of study.

## COURSES

For course descriptions see the Graduate Bulletin website: <http://www.uca.edu/gbulletin/>

### REQUIRED FOR M.A. GRADUATE STUDENTS

COURSE NUMBER	COURSE TITLE	CREDIT HOURS	SEMESTER OFFERED
Courses required if not previously taken as undergraduate.			
MATH5371	INTRODUCTION TO PROBABILITY	3	Fall & Summer 1
MATH 5372	INTRODUCTION TO STATISTICAL INFERENCE	3	Spring
Courses required of all M.A. candidates.			
MATH 6305	FOUNDATIONS OF MATHEMATICS	3	Fall
MATH 6307	ADVANCED TOPICS FOR MATHEMATICS EDUCATORS	3	Spring
MATH 6310	ALGEBRAIC STRUCTURES	3	Summer 2
MATH 6350	MODERN GEOMETRY	3	Summer 1
MATH 6370	DIFFERENTIAL CALCULUS FOR TEACHERS	3	Spring
MATH 6375	INTEGRAL CALCULUS FOR TEACHERS	3	Summer 1

### REQUIRED FOR THESIS OPTION

COURSE NUMBER	COURSE TITLE	CREDIT HOURS	SEMESTER OFFERED
MATH 6X96	THESIS (Must be repeated for up to at least 6 hours credit)	1-3	Fall, Spring, & Summer as needed.

### ELECTIVES

COURSE NUMBER	COURSE TITLE	CREDIT HOURS	SEMESTER OFFERED
MATH 5300	PROFESSIONALIZED SUBJECT MATTER	3	Fall
MATH 6315	INTRODUCTION TO NUMBER THEORY	3	Spring
MATH 6340	HISTORICAL PERSPECTIVES OF MATHEMATICS	3	Summer 2
MATH 6342	MATHEMATICAL MODELING	3	Spring or Fall as needed
MATH 6378	SYMMETRY ANALYSIS OF DIFFERENTIAL EQUATIONS	3	Spring on demand
MATH 6380	MATHEMATICS EDUCATION SEMINAR (May be repeated for up to 6 hours credit)	3	Fall
MATH 6X85	RESEARCH IN MATHEMATICS EDUCATION (With consent of advisor and instructor)	1-3	Fall, Spring, & Summer as needed.