MASTER OF SCIENCE IN APPLIED MATHEMATICS
UNIVERSITY OF CENTRAL ARKANSAS
DEPARTMENT OF MATHEMATICS

INTRODUCTION

The focus of the Master of Science program in Applied Mathematics is to train students in the process of mathematical modeling, so that the graduates can better serve both business and government agencies.

ADMISSION

To be admitted to the M.S. degree program in applied mathematics, 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 applications and credentials on file as early as possible.

SPECIFIC REQUIREMENTS

The M.S. degree in applied mathematics is 30-33 credit hours with a **thesis** and a **non-thesis** option. The thesis option requires 30 graduate credit hours with at least six hours of research and a minimum of 18 hours at the 6000-level. The non-thesis option requires at least 33 graduate credit hours and the successful completion of an oral examination. Both options must include the Core Courses: Math 6342, Math 6345, and Math 6348. The remaining hours may be selected from the list of elective courses and may include other courses at the 5000 level with the approval of the student's advisory committee.

Requirements for M.S. in Applied Mathematics

(For course description see the Graduate Bulletin website: http://www.uca.edu/gbulletin/)

CORE COURSES

COURSE NUMBER	COURSE TITLE	CREDIT HOURS	SEMESTER OFFERED
MATH 6342	**MATHEMATICAL MODELING**	3	Spring or Fall as needed
MATH 6345	**ADVANCED ORDINARY DIFFERENTIAL EQUATIONS**	3	Annually
MATH 6348	**NUMERICAL ANALYSIS**	3	Annually

ELECTIVES

COURSE NUMBER	COURSE TITLE	CREDIT HOURS	SEMESTER OFFERED
MATH 5315	**INTRODUCTION TO PARTIAL DIFFERENTIAL EQUATIONS**	3	Fall
MATH 5316	**FUNDAMENTALS OF APPLIED MATHEMATICS FOR FLUID MECHANICS AND GRANULAR MATERIALS**	3	Spring
MATH 5330	**MATHEMATICAL MODELING IN BIOLOGY**	3	Fall
MATH 5362	**ADVANCED CALCULUS I**	3	Fall
MATH 5363	**ADVANCED CALCULUS II**	3	Spring
MATH 5371	**INTRODUCTION TO PROBABILITY**	3	Fall
MATH 5372	**INTRODUCTION TO STATISTICAL INFERENCE**	3	Spring
MATH 5373	**APPLIED STATISTICS**	3	Fall
MATH 5374	**INTRODUCTION TO STOCHASTIC PROCESSES**	3	Spring
MATH 5375	**INTRODUCTION TO TOPOLOGY I**	3	On demand
MATH 5385	**COMPLEX ANALYSIS**	3	On demand
MATH 6315	**INTRODUCTION TO NUMBER THEORY**	3	Fall or Spring as needed
MATH 6355	**ADVANCED PARTIAL DIFFERENTIAL EQUATIONS**	3	On demand
MATH 6358	**NUMERICAL DIFFERENTIAL EQUATIONS**	3	On demand
MATH 6362	**INFINITE DIMENSIONAL DYNAMICAL SYSTEMS**	3	On demand
MATH 6365	**CONTROL THEORY**	3	On demand
MATH 6372	**INTEGRALTRANSFORMS**	3	On demand
MATH 6376	**DESIGN OF EXPERIMENTS**	3	On demand
MATH 6378	**SYMMETRY ANALYSIS OF DIFFERENTIAL EQUATIONS**	3	On demand
MATH 6382	**APPLIED MATH SEMINAR**	3	Fall, Spring
MATH 6X96	**THESIS** (Variable credit up to six hours)	3	Fall, Spring, Summer