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. By applying mathematical modeling within business, engineering, planning and other areas, significant problems can be studied using analytic and numerical methods.

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 of up to $5,000 and 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 University'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.

COURSES

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

REQUIRED

MATH 6342—**MATHEMATICAL MODELING**
MATH 6345—**ADVANCED ORDINARY DIFFERENTIAL EQUATIONS**
MATH 6348—**NUMERICAL ANALYSIS**

ELECTIVES

MATH 6355—**ADVANCED PARTIAL DIFFERENTIAL EQUATIONS**
MATH 6358—**NUMERICAL DIFFERENTIAL EQUATIONS**
MATH 6362—**INFINITE DIMENSIONAL DYNAMICAL SYSTEMS**
MATH 6365—**CONTROL THEORY**
MATH 6372—**INTEGRALTRANSFORMS**
MATH 6376—**DESIGN OF EXPERIMENTS**
MATH 6378—**SYMMETRY ANALYSIS OF DIFFERENTIAL EQUATIONS**
MATH 6396—**THESIS I**
MATH 6397—**THESIS II**