

REQUIREMENTS FOR THE B.S. DEGREE IN MATHEMATICS
DEPARTMENT OF MATHEMATICS
University of Central Arkansas

UCA STEM TEACH APPLIED MATHEMATICS OPTION

Core Courses (21 Hours)

COURSE NO.	COURSE	CREDIT HRS	PREREQUISITE	SEMESTER OFFERED
MATH 1496	Calculus I	4	C or better in MATH 1390 and MATH 1392; or C or better in MATH 1580; or equivalent.	Fall, Spring, & Summer
MATH 1497	Calculus II	4	C or better in MATH 1496.	Fall, Spring, & Summer
MATH 2335	Transition to Advanced Math	3	MATH 1497	Fall & Spring
MATH 2471	Calculus III	4	C or better in MATH 1497	Fall, Spring, & Summer
MATH 3320	Linear Algebra	3	MATH 1497 or 2330	Fall, Spring, & Summer
MATH 4371	Introduction to Probability Theory	3	MATH 1497	Fall

Required Courses (25 Hours)

MATH 2441	Mathematical Computation	4	MATH 1497	Fall & Spring
MATH 3331	Ordinary Differential Equations	3	MATH 1497	Fall & Spring
MATH 4305	Applied Math I	3	MATH 3320, 3331	Fall
MATH 4306	Applied Math II	3	MATH 4305	Spring
MATH 4313	Functions and Modeling	3		Fall
MATH 4345	College Geometry	3	MATH 1496	Spring
MATH 4372	Introduction to Statistical Inference	3	MATH 4371	Spring
MATH 4315 OR MATH 4340 OR MATH 4373	Partial Differential Equations OR Numerical Methods OR Regression Analysis	3	MATH 2471 and 3331 MATH 1497, 3320, & CSCI 1470 or equivalent MATH 4372	

AND UCA STEM TEACH MINOR

EDUC 1100	Inquiry Approaches to Teaching	1		Fall/Spring
EDUC 1101	Inquiry Based Lesson Design	1	EDUC 1100	Fall/Spring
EDUC 1301	Knowing and Learning	3	EDUC 1100	Fall/Spring
EDUC 2301	Classroom Interactions	3	EDUC 1301 OR or consent of instructor	Fall/Spring
EDUC 3300	Project-Based Instruction	3	Consent of instructor and admission to teacher ed program	Fall/Spring
STEM 3305	Perspectives on Mathematics & Science	3	EDUC 1301 or consent of instructor	Fall/Spring
STEM 3310	Research Methods in Mathematics & Science	3	EDUC 1301 or consent of instructor	Fall/Spring
STEM 4305	Apprentice Teaching Seminar	3	Completion of all other courses Co-requisite: 4600 Apprentice Teaching	Fall/Spring
⁴ STEM 4600	Apprentice Teaching	6	Completion of all other courses Co-requisite: 4305 Apprentice Teaching Seminar	Fall/Spring

ANCILLARY REQUIREMENTS

OTHER REQUIREMENTS

PHYS 1441 and 1442 OR
PHYS 1410 AND 1420 OR
CHEM 1450 and 1451 OR
ECON 2320 AND ECON 2321

- Must complete 120 semester hours including 38 hours of General Education.
- GPA of 2.5 or better in each of the major and minor fields.
- Must have 40 hours of upper level (3000 or 4000) courses.
- Praxis II content exams must be passed before enrolling in STEM 4600
- At least 15 hours of the major must be earned in residence.