Academic Map: Mathematics, STEMteach Applied Mathematics

Department:	Mathematics	**Degree:**	BS
Program/Major:	Mathematics		
Track/Emphasis:	STEMteach Applied Mathematics		
Does this program require a minor? (Yes/No)	Yes		

Important program information in the online *Undergraduate Bulletin*:

UCA Core Requirements:	http://uca.edu/ubulletin/general-policies-information/uca-core/
LD Core Check Sheet:	http://uca.edu/academicbulletins/ld-uca-core/
UD UCA Core Course List:	http://uca.edu/academicbulletins/ud-uca-core/
Degree Requirements:	http://uca.edu/ubulletin/general-policies-information/degree-requirements/
Program Description:	http://uca.edu/ubulletin/colleges-departments-programs/college-of-natural-sciences-and-mathematics/department-of-mathematics/
Course Descriptions:	http://uca.edu/ubulletin/courses/

This degree program requires a total of 120 semester credit hours, including at least 40 upper-division credit hours.

Comparable courses in the Arkansas Course Transfer System (ACTS) are cross-referenced in the ACTS column of each semester block below; a core link (http://uca.edu/academicbulletins/ld-uca-core/) takes the user to the *Undergraduate Bulletin*'s UCA Lower-Division Core check sheet, where LD UCA Core options and ACTS course numbers are listed in full; an acts link takes the user to the *Undergraduate Bulletin*'s ACTS page (http://uca.edu/academicbulletins/acts/) for additional information and a UCA-ACTS crosswalk.

Year 1

Fall – Semester 1 (credit hours: 14)

SUBJ	NUM	TITLE	SCH	ACTS
MATH	1496	Calculus I	4	MATH2405
WRTG	1310	Introduction to College Writing or Approved alternative (LD UCA Core: Writing Foundation)[1]	3	ENGL1013 core link
		LD UCA Core[1]	3	core link
		LD UCA Core[1]	3	core link
STEM	1100	Inquiry Approaches to Teaching (UCA STEMteach)[2]	1	

Spring – Semester 2 (credit hours: 15)

SUBJ	NUM	TITLE	SCH	ACTS
MATH	1497	Calculus II	4	MATH2505
WRTG ENGL	1320 1320	Academic Writing and Research or Interdisciplinary Writing and Research or Other approved alternative (LD UCA Core: Research/Writing)[1]	3	ENGL1023 ENGL1023 core link
		LD UCA Core[1]	3	core link
		LD UCA Core (Natural Sciences)[1, 3]	4	core link
STEM	1101	Inquiry Based Lesson Design (UCA STEMteach)	1	

Year 2

Fall – Semester 3 (credit hours: 17)

SUBJ	NUM	TITLE	SCH	ACTS
MATH	2335	Transition to Advanced Mathematics	3	
MATH	2441	Mathematical Computation	4	
STEM	1301	Knowing and Learning (UCA STEMteach)	3	
		LD UCA Core (Natural Sciences)[1, 3]	4	core link
		General Elective[3]	3	

Spring – Semester 4 (credit hours: 16/17)

SUBJ	NUM	TITLE	SCH	ACTS
MATH	2471	Calculus III	4	MATH2603
MATH	3320	Linear Algebra (UD UCA Core: I)	3	
		LD UCA Core[1]	3	core link
		Program Requirement[4]	3 or 4	
STEM	2301	Classrooms Interactions (UCA STEMteach)	3	

Year 3

Fall – Semester 5 (credit hours: 15)

SUBJ	NUM	TITLE	SCH	ACTS
MATH	4371	Introduction to Probability (UD UCA Core: R)	3	
MATH	3331	Differential Equations (UD UCA Core: C)	3	
		LD UCA Core[1]	3	core link
		LD UCA Core[1]	3	core link
STEM	3300	Project-Based Instruction (UCA STEMteach)	3	

Spring – Semester 6 (credit hours: 15/16)

SUBJ	NUM	TITLE	SCH	ACTS
MATH	3311	Statistical Methods	3	
MATH	4345	College Geometry	3	
		LD UCA Core[1]	3	core link
		Program Requirement[4]	3 or 4	
MATH	4306	Modeling and Simulation (UD UCA Core: Z)	3	

Year 4

Fall – Semester 7 (Credit hours: 15)

SUBJ	NUM	TITLE	SCH	ACTS
MATH	4350	Introduction to the History of Mathematics (UD UCA Core: D)	3	
		General Elective[3]	3	
		General Elective[3]	3	
MATH	4313	Function and Modeling	3	
STEM	3310	Research Method in Mathematics and Science (UCA STEMteach)	3	

Spring – Semester 12 (Credit hours: 12)

SUBJ	NUM	TITLE	SCH	ACTS
STEM	4605	Apprentice Teaching Seminar (UCA STEMteach)	6	
STEM	4600	Apprentice Teaching (UCA STEMteach) (UD UCA Core: Z)	6	

_____   March 22, 2016
SIGNED – DEPARTMENT CHAIR   DATE

_____   _____
SIGNED – COLLEGE DEAN   DATE

To be completed by the advisor when an Eight-Semester plan is accepted by the student:

If applicable, has student selected a minor? Type "x" as appropriate. _____ **No** __X__ **Yes**

If "yes," specify: UCA STEMteach

Notes

[1] See appropriate choices, alternatives, or substitutions under "UCA Lower Division Core" in the *Undergraduate Bulletin*. Prior to completion of 30 semester hours, a student must complete a UCA Lower Division Core course designated as a First-Year Seminar (FYS) in Critical Inquiry, Diversity, or Responsible Living.

The student will also need to complete major, minor, or general elective courses designated as fulfilling the upper-division and capstone requirements of the UCA Core. See annotations in this Academic Map for courses within the major that fulfill these requirements; for others, consult the *Undergraduate Bulletin* and your academic advisor.

[2] This Academic Map includes the 26 credit hours of the UCA STEMteach minor.

[3] Students will need to adjust the number of general elective credit hours depending on the sequence chosen to meet the program requirements.

[4] Program Requirement: PHYS 1441 and PHYS 1442 OR PHYS 1410 and PHYS 1420 OR CHEM 1450 and PHYS 1451 OR ECON 2320 and ECON 2321. Students who use the first course of the sequence for a lower-division UCA Core Critical Inquiry requirement (Physical Science or Social Science) will take an additional general elective instead of the program requirement in their fifth semester.