

## Academic Map: Mathematics, STEMteach Pure Mathematics Track

Department: Mathematics Degree: BS  
 Program/Major: Mathematics  
 Track/Emphasis: STEMteach Pure Mathematics Track  
 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/) (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](http://uca.edu/academicbulletins/acts/) 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	<a href="#">MATH2405</a>
WRTG	1310	Introduction to College Writing or Approved alternative (LD UCA Core: Writing Foundation) <sup>1</sup>	3	<a href="#">ENGL1013</a> <a href="#">core link</a>
		LD UCA Core <sup>1</sup>	3	<a href="#">core link</a>
		LD UCA Core <sup>1</sup>	3	<a href="#">core link</a>
STEM	1100	Inquiry Approaches to Teaching (UCA STEMteach) <sup>2</sup>	1	

#### Spring – Semester 2 (credit hours: 15)

SUBJ	NUM	TITLE	SCH	ACTS
MATH	1497	Calculus II	4	<a href="#">MATH2505</a>
WRTG ENGL	1320 1320	Academic Writing and Research or Interdisciplinary Writing and Research or Other approved alternative <sup>1</sup>	3	<a href="#">ENGL1023</a> <a href="#">ENGL1023</a> <a href="#">core link</a>
		LD UCA Core <sup>1</sup>	3	<a href="#">core link</a>
		LD UCA Core (Natural Sciences) <sup>1</sup>	4	<a href="#">core link</a>
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	2471	Calculus III	4	<a href="#">MATH2603</a>
STEM	1301	Knowing and Learning (UCA STEMteach) <sup>2</sup>	3	
		LD UCA Core (Natural Sciences) <sup>1</sup>	4	<a href="#">core link</a>
		General Elective	3	

**Spring – Semester 4 (credit hours: 15)**

SUBJ	NUM	TITLE	SCH	ACTS
MATH	3320	Linear Algebra (UD UCA Core: I)	3	
MATH	3331	Differential Equations (UD UCA Core: C)	3	
		LD UCA Core <sup>1</sup>	3	<a href="#">core link</a>
		LD UCA Core <sup>1</sup>	3	<a href="#">core link</a>
		LD UCA Core <sup>1</sup>	3	<a href="#">core link</a>

**Year 3****Fall – Semester 5 (credit hours: 15)**

SUBJ	NUM	TITLE	SCH	ACTS
MATH	3360	Introduction to Rings and Fields	3	
MATH	4371	Introduction to Probability (UD UCA Core: R)	3	
MATH	4313	Functions and Modeling	3	
MATH	3354 2330	Concepts of Discrete Mathematics or Discrete Structures I	3	
		LD UCA Core <sup>1</sup>	3	<a href="#">core link</a>

**Spring – Semester 6 (credit hours: 16)**

SUBJ	NUM	TITLE	SCH	ACTS
MATH	4350	Introduction to the History of Mathematics (UD UCA Core: D)	3	
MATH	4372 3311	Introduction to Statistical Inference or Statistical Methods II	3	
MATH	4345	College Geometry	3	
STEM	2301	Classroom Interactions (UCA STEMteach)	3	
		General Elective	4	

**Year 4****Fall – Semester 7 (Credit hours: 16)**

SUBJ	NUM	TITLE	SCH	ACTS
MATH	4362	Advanced Calculus I (UD UCA Core: Z)	3	
MATH		Math Major Elective	3	
		General Elective	4	
STEM	3300	Project-Based Instruction (UCA STEMteach)	3	

SUBJ	NUM	TITLE	SCH	ACTS
STEM	3310	Research Method in Mathematics and Science (UCA STEMteach) <sup>2</sup>	3	

**Spring – Semester 8 (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	

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 SIGNED – DEPARTMENT CHAIR

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 DATE

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 SIGNED – COLLEGE DEAN

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 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  Yes

**If “yes,” specify:** UCA STEMteach

### Notes

<sup>1</sup> 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 in the major that fulfill UD UCA Core requirements; for others, consult the *Undergraduate Bulletin* and your academic Advisor.

<sup>2</sup> This Academic Plan includes the 26 credit hours of the UCA STEMteach minor.