Academic Map: Mathematics, STEMteach Pure Mathematics

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

Important program information in the online *Undergraduate Bulletin*:

UCA Core Requirements:	https://uca.edu/ubulletin/general-policies-information/uca-core/
LD Core Check Sheet:	https://uca.edu/academicbulletins/ld-uca-core/
Degree Requirements:	https://uca.edu/ubulletin/general-policies-information/degree-requirements/
Program Description:	https://uca.edu/ubulletin/colleges-departments/cn/mathematics/
Course Descriptions:	https://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 (https://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 (https://uca.edu/academicbulletins/acts/) for additional information and a UCA-ACTS crosswalk.

Scholarship recipients: Please be aware of eligibility criteria for your scholarship(s). In particular, pay attention to (1) the enrollment requirements each semester for disbursement of your scholarship(s) and (2) the number of hours and GPA required each semester and/or year for renewal of your scholarship(s). Some Academic Maps may suggest enrollment in fewer hours than required for disbursement of your scholarship(s). In such cases, work with your academic advisor to adjust your schedule to meet requirements most efficiently. Contact the Office of Student Financial Aid at (501) 450-3140 with any questions regarding enrollment/renewal requirements of your scholarship(s). For online information resources, see endnote [1].

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)[2]	3	ENGL1013 core link
		LD UCA Core[2]	3	core link
		LD UCA Core[2]	3	core link
STEM	1100	Inquiry Approaches to Teaching (UCA STEMteach)[3]	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[2]	3	ENGL1023 ENGL1023 core link
		LD UCA Core[2]	3	core link
		LD UCA Core (Natural Sciences)[2]	4	core link

SUBJ	NUM	TITLE	SCH	ACTS
STEM	1101	Inquiry Based Lesson Design (UCA STEMteach)	1	

Year 2

Fall – Semester 3 (credit hours: 18)

SUBJ	NUM	TITLE	SCH	ACTS
MATH	2335	Transition to Advanced Mathematics	3	
MATH	2471	Calculus III	4	MATH2603
		LD UCA Core (Natural Sciences)[2]	4	core link
		General Elective	4	
		LD UCA Core	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[2]	3	core link
		LD UCA Core[2]	3	core link
STEM	1301	Knowing and Learning (UCA STEMteach)	3	

Year 3

Fall – Semester 5 (credit hours: 15)

SUBJ	NUM	TITLE	SCH	ACTS
MATH	3360	Introduction to Rings and Fields	3	
MATH	4313	Functions and Modeling	3	
		LD UCA Core[2]	3	core link
MATH	4350	Introduction to the History of Mathematics (UD UCA Core: D)	3	
MATH	4371	Introduction to Probability (UD UCA Core: R)	3	

Spring – Semester 6 (credit hours: 16)

SUBJ	NUM	TITLE	SCH	ACTS
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	
		Elective (such as MATH 4301)	3	

Year 4

Fall – Semester 7 (Credit hours: 15)

SUBJ	NUM	TITLE	SCH	ACTS
MATH	4362	Advanced Calculus I (UD UCA Core: Z)	3	
MATH		Math Major Elective	3	

SUBJ	NUM	TITLE	SCH	ACTS
STEM	3300	Project-Based Instruction (UCA STEMteach)	3	
STEM	3310	Research Method in Mathematics and Science (UCA STEMteach)[3]	3	
		Elective (such as MATH 3370)	3	

Spring – Semester 8 (Credit hours: 12)

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

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 online information resources for UCA scholarships at https://uca.edu/scholarships/ and for state scholarships at https://scholarships.adhe.edu/scholarships-and-programs/a-z/.

[2] 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.

[3] This Academic Plan includes the 26 credit hours of the UCA STEMteach minor.