Academic Map: Mathematics, Pure Mathematics

Department: Mathematics **Degree:** BS
Program/Major: Mathematics
Track/Emphasis: 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 UCA Core Check Sheet:	https://uca.edu/academicbulletins/ld-uca-core/
UD UCA Core Course List:	https://uca.edu/academicbulletins/ud-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: 16)

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
		LD UCA Core[2]	3	core link

Spring – Semester 2 (credit hours: 14)

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)[2]	3	ENGL1023 ENGL1023 core link
		LD UCA Core[2]	3	core link

SUBJ	NUM	TITLE	SCH	ACTS
		LD UCA Core (Natural Sciences)[2]	4	core link

Year 2

Fall – Semester 3 (credit hours: 14)

SUBJ	NUM	TITLE	SCH	ACTS
MATH	2335	Transition to Advanced Mathematics	3	
MATH	2471	Calculus III	4	MATH2603
		LD UCA Core[2]	3	core link
		LD UCA Core (Natural Sciences)[2]	4	core link

Spring – Semester 4 (credit hours: 15)

SUBJ	NUM	TITLE	SCH	ACTS
MATH	3320	Linear Algebra (UD UCA Core: I)	3	
MATH	3331	Ordinary Differential Equations (UD UCA Core: C)	3	
		LD UCA Core[2]	3	core link
		LD UCA Core[2]	3	core link
		Minor Field Course[3, 4]	3	

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	2441	Mathematical Computation	3	
		UD UCA Core (Diversity)	3	
		Minor Field[3, 4]	3	

Spring – Semester 6 (credit hours: 15)

SUBJ	NUM	TITLE	SCH	ACTS
MATH	3362	Introduction to Group Theory	3	
MATH		MATH Major Elective	3	
		General Elective[4] – an upper-level Math course is suggested	3	
		Minor Field[3, 4]	3	
		Minor Field[3, 4]	3	

Year 4

Fall – Semester 7 (Credit hours: 16)

SUBJ	NUM	TITLE	SCH	ACTS
MATH	4362	Advanced Calculus I (UD UCA Core: Z)	3	
		General Elective[4] – an upper-level Math course is suggested	3	
		General Elective[4]	4	

SUBJ	NUM	TITLE	SCH	ACTS
		Minor Field[3, 4]	3	
		Minor Field[3, 4]	3	

Spring – Semester 8 (Credit hours: 15)

SUBJ	NUM	TITLE	SCH	ACTS
		General Elective[4] – an upper-level Math course is suggested	3	
		General Elective[4] – an upper-level Math course is suggested	3	
		General Elective[4]	3	
		Minor Field[3, 4]	3	
		Minor Field[3, 4]	3	

_____ _____

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 _____ Yes
If "yes," specify: _____

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 designated in the UCA Core Requirements and the lower-division (LD) UCA Core Check Sheet in the *Undergraduate Bulletin*. Prior to completion of 30 semester hours, a student must complete an LD UCA 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 these upper-division requirements; for others, consult the *Undergraduate Bulletin* and your academic advisor.

[3] This Academic Map includes 24 credit hours in the Minor field of study. Minor requirements range from 15 to 27 credit hours, so the student will need to adapt the number of general elective and minor elective credit hours in this plan as needed, depending upon the chosen minor field. Depending on a student's choice of minor and special degree requirements, the total number of credit-hours taken may exceed the total number of credit hours required to complete the program.

[4] The pure mathematics major requires 24 hours of upper-division courses. The additional 16 upper-division credit hours needed to complete the degree may be met by courses in the minor field and by additional math or general electives.