

## **Mathematical Sciences, BS**

2024-2025 Catalog | catalog.uah.edu

Completed	Course Number	Credits	Course Name	Semester Usually Offered		
			Charger Foundations Charger Foundation Charger F			
			Area I: Freshman Composition 3-6 credits			
	EH 101&102	6	College Writing I&II*	FA/SP/SU		
	EH 103	3	Accelerated College Writing*	SP		
	EH 105	J				
Area II: Humanities and Fine Arts 12 credits						
		3	Fine Art FA/SP/S			
		3	Literature FA/SP/			
		3	Non-Literature Humanity FA			
		3	Humanities/Fine Arts/Literature	FA/SP/SU		
			Area III: Mathematics and Sciences 11-12 credits  Mathematics 4 credits			
	MA 171, or MA 171S MA150 & 151	4	Calculus I* Calculus I with Foundations A & B	FA/SP/SU		
			Natural Sciences (Lab) 8 credits			
	PH 111/114	3/1	General Physics w/ Calculus I + Lab	FA		
	PH 112/115	3/1	General Physics w/ Calculus II + Lab	SP		
Area IV: History and Social & Behavioral Sciences 12 credits						
		3	History	FA/SP/SU		
		3	Social & Behavioral Science	FA/SP/SU		
		3	Social & Behavioral Science	FA/SP/SU		
		3	History/Social & Behavioral Science	FA/SP/SU		
			Area V: Pre-Professional For Mathematical Sciences Majors 14 credits			
	FYE 101S	1	Charger Success - Science	FA		
	CM 113	3	Public Speaking	FA/SP/SU		
	0.11.10	4	Additional Lab Science	FA/SP/SU		
	CS 104	3	Intro to Computer Programming	FA/SP/SU		
	CS 121	3	Computer Science I	FA/SP/SU		
	03 121	· ·	Major Requirements	17/03/730		
			Mathematical Sciences Core 29 credits			
	MA 172	4	Calculus II	FA/SP/SU		
	MA 201	4	Calculus III	FA/SP/SU		
	MA 238	3	Appl Differential Equations	FA/SP/SU		
	MA 244	3	Intro to Linear Algebra	FA/SP/SU		
	MA 330	3	Foundations of Math	FA/SP/SU		
	MA 385	3	Intro to Probability & Statistics	FA/SP/SU		
	MA 442	3	Algebraic Structures w/ Application	FA/SP/SU		
	MA 452	3	Intro to Real Analysis	FA/SP		
	MA 465	3	Intro to Math Modeling	SP		
			Mathematical Sciences Elective Requirements 9 credits			
			Choose three 300-level or higher MA course to reach a minimum of 9 credit hours			
			General Electives			

Elective courses can be taken from any department and do not have to be taken in your major or minor.

## Total = 120+ credits to graduate

36 of the 120 credits must be taken at 300-level or higher.
All prerequisite classes must be completed with a "C-" or higher grade.
The Catalog is the final authority for all degree requirements.
\*Placement Requirements: https://www.uah.edu/admissions/undergraduate/admitted-students/academic-placement

Charger Foundations Choices						
I. Freshman Composition	Choose 1	College Writing I & II (EH 101 + 102) or (EH 101 + 101L & 102) Honors English Seminar (EH 105; equivalent to EH 101 & EH 102) Accelerated College Writing (EH 103: equivalent to EH 101 & EH 102)				
II. Fine Arts	Choose 1	Ancient to Medieval Art (ARH 100) Renaissance to Modern Art (ARH 101) World Art (ARH 103) Introduction to Drawing (ARS 160) Intro to Film Studies (FMA 123) Intro to Music Literature (MU 100) Theatre Appreciation (TH 122)				
II. Humanities (Literature)	Choose 1	Readings Literature/Culture I (EH 207) Readings Literature/Culture II (EH 208) Literature Without Borders (EH 241) Mythology (EH 242)	Protest Literature (EH 243) Heroes &/or Monsters (EH 244) Love &/or Romance (EH 245) Speculative Realities (EH 246)			
II. Humanities (Non-Literature)	Choose 1	Ancient to Medieval Art (ARH 100) Renaissance to Modern Art (ARH 101) World Art (ARH 103) Introduction to Drawing (ARS 160) Ancient & Medieval Worlds (AMS 229) Public Speaking (CM 113) Intro to Film Studies (FMA 123) Intro to Music Literature (MU 100) Intro to Philosophy (PHL 101)	Intro to Philosophy (PHL 101) Intro to Ethics (PHL 102) Intro to Logic (PHL 103) Science, Tech & Human Values (PHL 150) Theatre Appreciation (TH 122) Intro to Women's Studies (WGS 200) Foreign Language (WLC 101) International Cinema (WLC 204)			
III. Mathematics	$\rightarrow$	Calculus I MA 171 or MA 171S or (MA150+151)				
III. Natural Sciences (Lab) Sequence	$\rightarrow$	General Physics w/ Calculus I (PH 111/114) General Physics w/ Calculus II (PH 112/115)				
IV. History	Choose 1	World History I (HY 103) World History II (HY 104)	United States to 1877 (HY 221) United States Since 1877 (HY 222)			
IV. Social & Behavioral Sciences	Choose 2	World Geography (AES 105) Human Geography (AES 110) Global systems & Cultures (GS 200) Macroeconomics (ECN 142) Microeconomics (ECN 143) American Gov't (PSC 101) Politics & Foreign Govt (PSC 102)	International Relations (PSC 260) General Psychology (PY 101) Life Span Development (PY 201) Intro to Sociology (SOC 100) Analysis of Social Problems (SOC 102) Intro to Criminology (SOC 103)			
	Students	Students must take one literature and or must also take <u>either</u> a second literature <u>or</u> histo				
Area II Sequence		erature <b>AND</b> History or Social & Behavioral Science				
<u>OR</u>						
Area IV Sequence	Area IV Sequence Take a 2 <sup>nd</sup> History <b>AND</b> Fine Arts or Non-Literature Humanities or Literature Humanities					
		Area V. Choices				
Additional Lab Science	Choose 1	Environmental Earth Science (AES 103/103L) Weather & Climate Change (AES 104/104L) Exploring the Cosmos (AST 106/106L) Principles of Biology (BYS 119/121) Organismal Biology (BYS 120/122) Intro to Chemistry (CH 101/105) General Chemistry I (CH 121/125) General Physics w/ Calculus III (PH 113/116)				
Computer Programming	Choose 1	Intro to C Programming (CS 102) Intro to CS Using Python (CS 104)				