

COLLEGE OF SCIENCE

Physics, BS Applied & Theoretical Physics Concentration

2025-2026 Catalog | catalog.uah.edu

Completed	Course Number	Credits	Course Name	Semester Usually Offered
hoose one:			Charger Foundations Area I: Freshman Composition 3-6 credits	
	EH 101 & EH 102	6	College Writing, I & II*	FA/SP/SU
	EH 103	3	Accelerated College Writing*	SP
	EH 105	3	Honors English Seminar*	FA
_			Area II: Humanities and Fine Arts 12 credits	5 A 40 D 40 L
		3	Fine Art	FA/SP/SU
		3	Literature	FA/SP/SU
		3	Non-Literature Humanity	FA/SP/SU
		3	Humanities/Fine Arts/Literature	FA/SP/SU
			Area III: Mathematics and Sciences 11-12 credits Mathematics 4 credits	
	MA 171, MA 171S or MA 150 & 151	4	Calculus I Calculus I Calculus I with Foundations A&B	FA/SP/SU
			Natural Sciences (Lab) 8 credits	
	CH 121/125	3/1	General Chemistry I + Lab	FA/SP/SU
	CH 123/126	3/1	General Chemistry II + Lab	FA/SP
			Area IV: History and Social & Behavioral Sciences 12 credits	
		3	History Social & Behavioral Science	FA/SP/SU
				FA/SP/SU
		3	Social & Behavioral Science	FA/SP/SU
		3	History/Social & Behavioral Science Area V: Pre-Professional	FA/SP/SU
			Additional Requirements 18 credits	
	FYE 101S	1	Charger Success - Science	FA
	CS 104	3	Intro to CS Using Python	FA/SP/SU
	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
			Major Requirements	
	PH 110	2	Physics Core 28 credits Frontiers in Science	EA
		3		FA
	PH 111/114	3/1	General Physics w/ Calculus I + Lab	FA/SP/SU
	PH 112/115	3/1	General Physics w/ Calculus II + Lab	FA/SP/SU
	PH 113/116	3/1	General Physics w/ Calculus III + Lab	FA/SP/SU
	PH 251	1	Special Relativity	FA/SP
	PH 301	3	Intermediate Mechanics	SP
	PH 305	3	Math Methods in Physics	SP
	PH 351	3	Introduction to Modern Physics	FA
	PH 499	3	Physics Practicum	FA
			Applied & Theoretical Concentration Elective Requirements 19 credits	
	PH 310	2	Intermediate Lab I	FA
	PH 311	2	Intermediate Lab II	SP
	PH 421	3	Thermal & Statistical Physics	SP
	PH 431	3	Intermediate Electricity & Magnetism I	FA
	PH 432	3	Intermediate Electricity & Magnetism II	SP
	PH 451	3	Intro Quantum Mechanics I	FA
	PH 452	3	Intro Quantum Mechanics II	SP
_		-	General Electives	<u> </u>

Elective courses can be taken from any department and do not have to be taken in your major or minor. Only 4 HPE credits can apply.

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



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Charger Foundations Choices						
Freshman Composition	Choose 1	College Writing, I & II (EH 101 & EH 102) Honors English Seminar (EH 105; equivalent to EH 101 & EH 102) Accelerated College Writing (EH 103: equivalent to EH 101 & EH 102)				
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)				
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)			
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 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)			
Mathematics	Choose 1	Calculus I (MA 171 or MA 171S) or Calculus I with Foundations A & B (MA 150 & 151)				
Natural Sciences (Lab) Sequence	Required	General Chemistry I + Lab (CH 121/125) General Chemistry II + Lab (CH 123/126)				
History	Choose 1 or 2	World History I (HY 103) World History II (HY 104)	United States to 1877 (HY 221) United States Since 1877 (HY 222)			
Social & Behavioral Sciences	Choose 2 or 3	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 must take one literature and one history course. Students must also take <u>either</u> a second literature <u>or</u> history course to complete a sequence.						
	Take a 2 nd Literature AND History or Social & Behavioral Science					
	Take a 2 nd History AND Fine Arts or Non-Literature Humanities or Literature Humanities					