

COLLEGE OF SCIENCE

Physics, BS Astronomy & Astrophysics Concentration 2022-2023 Catalog | catalog.uah.edu

Completed	Course Number	Credits	Course Name	Prerequisites, Corequisites and/or Prerequisites with Concurrency	Semester Usually Offered		
Charger Foundations							
Area I: Freshman Composition 3-6 credits - see attached for more options							
	EH 101	3	College Writing I	<u>Placement</u>	FA/SP/SU		
	EH 102	3	College Writing II	EH 101 or EH 101S	FA/SP/SU		
	EH 103	3	Accelerated College Writing	<u>Placement</u>	SP		
	EH 105	3	Honors English Seminar	Honors	FA		
Area II: Humanities and Fine Arts 12 credits							
		3	Fine Art	See attached for choices			
		3	Literature	Completion of Area I; See attached for choices			
		3	Non-Literature Humanity	See attached for choices			
		3	Humanities/Fine Arts/Literature	See attached for choices			
			Area III: Mathematics and Scie	ences 11-12 credits			
			Mathematics 4 cr	redits			
	MA 171 or MA 171S	4	Calculus A	Placement or MA 113 or MA 115	FA/SP/SU		
			Natural Sciences (Lab) 8 credits			
	CH 121/125	3/1	General Chemistry I + Lab	Placement or CH 101	FA		
	CH 123/126	3/1	General Chemistry II + Lab	CH 121	SP		
Area IV: History and Social & Behavioral Sciences 12 credits							
		3	History	See attached for choices			
		3	Social & Behavioral Science	See attached for choices			
		3	Social & Behavioral Science	See attached for choices			
		3	History/Social & Behavioral Science	See attached for choices			
		J J	Area V: Pre-Profes				
			For Physics Majors 1				
	FYE 101S	1	Charger Success - Science	REQUIRED	FA		
	FIE IUIS	3	Intro to Computer Programming	See attached for choices	ГА		
	NAA 470	4	Calculus B	MA 171	FA/SP/SU		
	MA 172			110.1.1.1			
	MA 201	4	Calculus C	MA 172	FA/SP/SU		
	MA 238	3	Appl Differential Equations	MA 172, 201			
	MA 244	3	Intro to Linear Algebra	MA 120 or 172			
			Major Requirem Physics Core 28 c				
	PH 110	3	Frontiers in Science	PH majors and minors only	FA		
	PH 111/114	3/1	General Physics w/ Calculus I + Lab	MA 171	FA/SP/SU		
	PH 112/115	3/1	General Physics w/ Calculus II + Lab	PH 111/114, MA 172	FA/SP/SU		
	PH 113/116	3/1	General Physics w/ Calculus III + Lab	PH 112/115, MA 201	FA/SP/SU		
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	PH 251	-	Special Relativity	PH 112, MA 172, prereq w/ conc: PH 113	SP		
	PH 301	3	Intermediate Mechanics	PH 111 and (PH 305 or MA 238) PH 112	SP SP		
	PH 305	-	Math Methods in Physics		* * * * * * * * * * * * * * * * * * * *		
	PH 351	3	Introduction to Modern Physics	PH 113 and (MA 238 or 244), prereq w/ conc: PH 251	FA		
	PH 499	3	Physics Practicum	Graduating senior	FA		
_			Astronomy & Astrophysics Concentrati	on Requirements 14 credits			
	AST 106/106L	4	Exploring the Cosmos I + Lab				
	AST 107/107L	4	Exploring the Cosmos II + Lab	AST 106	SP		
	AST 371	3	Intro to Astrophysics	PH 111/114 and MA 201	SP		
	AST 471	3	Astrophysics	AST 371 and PH 351	FA		
			Astronomy & Astrophysics Concentration I				
			Choose one PH/OPT/AST 300-le				
			General Elective				
	Ele	ective cour	, ,	o 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.			



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		Charger Foundations Choice	s				
I. Freshman Composition	Choose 1	College Writing I & II (EH 101 + 102) Intensive Writing & Studio & Freshman Comp II (EH 101S + 101L & EH 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) Honors Literature/Culture I (EH 209) Honors Literature/Culture II (EH 210) 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 A (MA 171 or MA 171S)					
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 must take one literature and one history course. Students must also take either a second literature or history course to complete a sequence.							
Area II Sequence Take a 2 nd Literature AND History or Social & Behavioral Science							
OR OR	Take a Z Lite	ristory or social a behavioral science					
Area IV Sequence							
Area V. Choices							
Computer Programming	Choose 1	Intro to Computers & Programming (CS 100) Intro to C Programming (CS 102) Intro to Programming Using JAVA (CS 103) Intro to CS Using Python (CS 104)					