

COLLEGE OF SCIENCE

Atmospheric & Earth Science, BS

Atmospheric Science & Meteorology Concentration 2022-2023 Catalog | catalog.uah.edu

Completed	Course Number	Credits	Course Name	Prerequisites, Corequisites, and/or Prerequisites with Concurrency	Semester Usually Offered
			Charger Foun Area I: Freshman Composition 6 credit		
	EH 101	3	College Writing I	Placement	FA/SP/SU
	EH 102	3	College Writing I	EH 101 or EH 101S	FA/SP/SU
	EH 102	3	Accelerated College Writing	Placement	SP
	EH 105	3	Honors English Seminar	Honors	FA
	LITIUS	5	Area II: Humanities and F		TA
		3	Fine Art	See attached for choices	
		3	Literature	Completion of Area I	
		3	Non-Literature Humanity	See attached for choices	
	*	3	Humanities/Fine Arts/Literature	See attached for choices	
		5	Area III: Mathematics and		
			Mathematics 4		
	MA 171 or MA 1715	5 4	Calculus A	MA 113, 115, or Placement	FA/SP/SU
			Natural Sciences (L		17031730
	PH 111/114	3/1	Physics w/ Calculus I + Lab	MA 171	FA/SP/SU
	PH 112/115	3/1	Physics w/ Calculus II + Lab	PH 111/114, MA 172	FA/SP/SU
	111112/113	5/1	Area IV: History and Social & Beh		17031730
		3	History	See attached for choices	
	AES 105	3	World Geography	Strongly Recommended, see attached for all choices	SP
	AES 105	3	Human Geography	Strongly Recommended, see attached for all choices	FA
	ALSTIC	3	History/Social & Behavioral Science	See attached for choices	14
		5	Area V: Pre-Pro		
			For Atmospheric & Earth Science		
	EVE 1010	1	•	REQUIRED	۲۸
	FYE 101S	1	Charger Success - Science		FA
	CI 1 4 0 4 /4 0 5	3	Intro to Computer Programming	See attached for choices	
	CH 121/125	3/1	General Chemistry I + Lab	Placement or MA 113 w/ conc	FA/SP/SU
	MA 172	4	Calculus B	MA 171	FA/SP/SU
	MA 201	4	Calculus C	MA 172	FA/SP/SU
	MA 238	3	Applied Differential Equations	MA 172, 201 w/ conc	FA/SP/SU
		3	Applied Statistics Course	See attached for choices	
			Major Require		
			Atmospheric & Earth Scie	ince Core 17 credits	54.000
	AES 103/103L	4	Environmental Earth Science + Lab		FA/SP
	AES 104/ 104L	4	Weather & Climate Change + Lab		FA/SP
	AES 209	2	Data Analysis Tools	AES 103, 104 and CS 102+ w/ conc	FA/SP
	*AES 301	3	Intro to Earth & Atmos Physics	AES 103, 104, PH 101 or 111, MA 120 or 171	FA/SP
	*AES 303	3	Class/Physical Causes Climate	AES 103, 104, PH 101 or 111, MA 120 or 171	SP
	AES 498	1	Research & Prof Dev Capstone	Junior or Senior Standing (61+ credits)	FA/SP
			Atmospheric Science/Meteorolog		
	AES 212/212L	4	Severe Weather Analysis	AES 104	SP
	AES 321	3	Pollution Problems	AES 103, 104, CH 101 or 121, MA 120+, PH 101 or 111	FA
	(or AES 370)		(or Intro to Remote Sensing)	(AES 370: and CS 102, 103, or 104)	(SP)
	*AES 341	3	Thermodynamic Meteorology	AES 209, 212, 301, and CS 102/103/104 preregs w/ conc: MA 201, PH 112	FA
				AES 301, PH 111, CS 102/103/104	
	*AES 351	3	Dynamic Meteorology	prereg w/ conc: MA 201	FA
	450.000		Python for GIS	AES 313	
	AES 408	3	(or Sci Programming for Earth/Atmos)	(AES 409: AES 301, CS 102/103/104,	SP
	(or AES 409)			MA 172, PH 112/115)	(FA)
	Atmo	spheric Sci	ience/Meteorology Concentration Electi	ives Choose 17 credits: 9 credits must be 400+ level	
*AES 305,				rds the National Weather Service GS-1340 Federal Civil Se e 3 GIS tools courses to count as concentration electives.	rvice Requirements
				e of these courses to count as a concentration elective.	
AES 3	21, AES 370, AES 408	8, AES 409	- Each of these courses can be used to sati	sfy a concentration requirement or an elective requiremen	t, but not both.
				alter a	
			General Ele		
	El	ective cour		I do not have to be taken in your major or minor.	
	EI	ective cour		do not have to be taken in your major or minor.	



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		Charger Foundations Choices				
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)				
ll. 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	Physics w/ Calculus I (PH 111/114) 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)			
e		Students must take one literature and one histo				
		either a second literature or history/social & behaviora	al science course to complete a sequence.			
•	Area II Sequence Take a 2 nd Literature AND History or Social & Behavioral Science					
Area IV Sequence	OR Area IV Sequence Take either 2 nd History OR 3 rd Social & Behavioral Science AND Fine Arts or Non-Literature Humanities or Literature Humanities					
		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)					
Applied Statistics Choose 1		Elements of Statistics Analysis (MA 281) Probability & Statistics (MA 385) Intro to Social Science Statistics (PSC 300) Psychological Statistics (PY 300) Statistics for Social Sciences (SOC 303)				
		Major Choices				
Concentration Electives	Choose 17 Credits (9 @ 400+)	AES 305 Hydrology* AES 313 Geographic Information Systems AES 321 Pollution Problems AES 352 Synoptic Meteorology* AES 370 Intro to Remote Sensing AES 402 Natural Disasters AES 408 Python for GIS AES 409 Scientific Programming for Earth & Atmos AES 410 Operational Weather Forecasting* AES 414 Geospatial Applications AES 420 Intro Atmospheric Chemistry & Air Pollution	AES 441 Atmospheric Thermodynamics & Cloud Physics AES 451 Atmospheric Fluid Dynamics I AES 454 Forecasting Mesoscale Proc* AES 461 Atmospheric Radiation I AES 471 Radar Meteorology AES 472 Satellite Meteorology* AES 490 Special Topics in Earth & Atmos AES 495 Directed Study AES 497 Undergrad Internship AES 499 Undergrad Research			

Strongly recommended.