Atmospheric & Earth Science, BS
Atmospheric Science & Meteorology Concentration
2024-2025 Catalog | catalog.uah.edu

Completed	Course Number	Credits	Course Name	Semester Usually Offered
Charger Foundations				
Area I: Freshman Composition 63-6 credits – see attached for more options				
☐	EH 101	3	College Writing I	FA/SP/SU
☐	EH 102	3	College Writing 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				
☐		3	Fine Art	
☐		3	Literature	
☐		3	Non-Literature Humanity	
☐	*	3	Humanities/Fine Arts/Literature	
Area III: Mathematics and Sciences 12 credits				
Mathematics 4 credits				
☐	MA 171 or MA 171S	4	Calculus I	FA/SP/SU
Natural Sciences (Lab) 8 credits				
☐	PH 111/114	3/1	Physics w/ Calculus I + Lab	FA/SP/SU
☐	PH 112/115	3/1	Physics w/ Calculus II + Lab	FA/SP/SU
Area IV: History and Social & Behavioral Sciences 12 credits				
☐		3	History	
☐	AES 105	3	World Geography	SP
☐	AES 110	3	Human Geography	FA
☐		3	History/Social & Behavioral Science	
Area V: Pre-Professional				
For Atmospheric & Earth Science Majors (ATS) 22 credits				
☐	FYE 101S	1	Charger Success – Science	FA
☐		3	Intro to Computer Programming	
☐	CH 121/125	3/1	General Chemistry I + Lab	FA/SP/SU
☐	MA 172	4	Calculus II	FA/SP/SU
☐	MA 201	4	Calculus III	FA/SP/SU
☐	MA 238	3	Applied Differential Equations	FA/SP/SU
☐		3	Applied Statistics Course	
Major Requirements				
Atmospheric & Earth Science Core 17 credits				
☐	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	FA/SP
☐	*AES 301	3	Intro to Earth & Atmos Physics	FA/SP
☐	*AES 303	3	Class/Physical Causes Climate	SP
☐	AES 498	1	Research & Prof Dev Capstone	FA/SP
Atmospheric Science/Meteorology Concentration 16 credits				
☐	AES 212/212L	4	Severe Weather Analysis	SP
☐	AES 321 (or AES 370)	3	Pollution Problems (or Intro to Remote Sensing)	FA (SP)
☐	*AES 341	3	Thermodynamic Meteorology	FA
☐	*AES 351	3	Dynamic Meteorology	FA
☐	AES 408 (or AES 409)	3	Python for GIS (or Sci Programming for Earth/Atmos)	SP (FA)
Atmospheric Science/Meteorology Concentration Electives Choose 17 credits: 9 credits must be 400+ level				
*AES 305, AES 352, AES 410, AES 454, AES 471, AES 472. These courses count towards the National Weather Service GS-1340 Federal Civil Service Requirements.				
AES 313, AES 408, and AES 414 - Student may choose 2 of these 3 GIS tools courses to count as concentration electives.				
AES 495 or AES 497 or AES 499 - Student may choose only one of these courses to count as a concentration elective.				
AES 321, AES 370, AES 408, AES 409 – Each of these courses can be used to satisfy a concentration requirement or an elective requirement, but not both.				
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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.				

The Catalog is the final authority for all degree requirements.

Placement Requirements: https://www.uah.edu/admissions/undergraduate/admitted-students/academic-placement

THE UNIVERSITY OF ALABAMA IN HUNTSVILLE | **COLLEGE OF SCIENCE**

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)
II. Humanities (Literature)	Choose 1	Readings Literature/Culture I (EH 207) Mythology (EH 242) Readings Literature/Culture II (EH 208) Protest Literature (EH 243) Honors Literature/Culture I (EH 209) Heroes &/or Monsters (EH 244) Honors Literature/Culture II (EH 210) Love &/or Romance (EH 245) Literature Without Borders (EH 241) Speculative Realities (EH 246)
II. Humanities (Non-Literature)	Choose 1	Ancient to Medieval Art (ARH 100) Intro to Philosophy (PHL 101) Renaissance to Modern Art (ARH 101) Intro to Ethics (PHL 102) World Art (ARH 103) Intro to Logic (PHL 103) Introduction to Drawing (ARS 160) Science, Tech & Human Values (PHL 150) Ancient & Medieval Worlds (AMS 229) Theatre Appreciation (TH 122) Public Speaking (CM 113) Intro to Women's Studies (WGS 200) Intro to Film Studies (FMA 123) Foreign Language (WLC 101) Intro to Music Literature (MU 100) International Cinema (WLC 204) Intro to Philosophy (PHL 101)
III. Mathematics	→	Calculus I (MA 171 or MA 171S)
III. Natural Sciences (Lab) Sequence	→	Physics w/ Calculus I (PH 111/114) Physics w/ Calculus II (PH 112/115)
IV. History	Choose 1	World History I (HY 103) United States to 1877 (HY 221) World History II (HY 104) United States Since 1877 (HY 222)
IV. Social & Behavioral Sciences	Choose 2	**World Geography (AES 105)** International Relations (PSC 260) **Human Geography (AES 110)** General Psychology (PY 101) Global systems & Cultures (GS 200) Life Span Development (PY 201) Macroeconomics (ECN 142) Intro to Sociology (SOC 100) Microeconomics (ECN 143) Analysis of Social Problems (SOC 102) American Gov't (PSC 101) Intro to Criminology (SOC 103) Politics & Foreign Govt (PSC 102)

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 2nd Literature **AND** History or Social & Behavioral Science
OR	
Area IV Sequence	Take a 2nd History **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 441 Atmospheric Thermodynamics & Cloud Physics AES 313 Geographic Information Systems AES 451 Atmospheric Fluid Dynamics I AES 321 Pollution Problems AES 454 Forecasting Mesoscale Proc* AES 352 Synoptic Meteorology* AES 461 Atmospheric Radiation I AES 370 Intro to Remote Sensing AES 471 Radar Meteorology* AES 402 Natural Disasters AES 472 Satellite Meteorology* AES 408 Python for GIS AES 490 Special Topics in Earth & Atmos AES 409 Scientific Programming for Earth & Atmos AES 495 Directed Study AES 410 Operational Weather Forecasting* AES 497 Undergrad Internship AES 414 Geospatial Applications AES 499 Undergrad Research AES 420 Intro Atmospheric Chemistry & Air Pollution

Strongly recommended.

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