Chemistry, BS
Environmental Chemistry Concentration
2026-2027 Catalog

Charger Foundations

Area I: Freshman Composition

Course Number	Credits	Course Name	Semester Usually Offered
EH 101 and 102	6	College Writing I and II	Fall, Spring, Summer
EH 103	3	Accelerated College Writing	Fall, Spring
EH 105	3	Honors English Seminar	Fall

Area II: Humanities and Fine Arts

Course Number	Credits	Course Name	Semester Usually Offered
Varies	3	Fine Art	Fall, Spring, Summer
Varies	3	Literature	Fall, Spring, Summer
CM 113	3	Public Speaking	Fall, Spring, Summer
Varies	3	Humanities/Fine Art/Literature	Fall, Spring, Summer

Area III: Mathematics and Sciences 12-14 credits

Mathematics 4-6 credits

Course Number	Credits	Course Name	Semester Usually Offered
MA 171 or MA 171S or MA 150 & 151	4-6	Calculus I or Calculus I with Foundations A & B	Fall, Spring, Summer

Natural Sciences (Lab) 8 credits

Course Number	Credits	Course Name	Semester Usually Offered
PH 111/114	3/1	Physics with Calculus I + Lab	Fall, Spring, Summer
PH 112/115	3/1	Physics with Calculus II + Lab	Fall, Spring, Summer

Area IV: History and Social and Behavioral Sciences 12 credits

Course Number	Credits	Course Name	Semester Usually Offered
Varies	3	History	Fall, Spring, Summer
Varies	3	Social & Behavioral Science	Fall, Spring
Varies	3	Social & Behavioral Science	Fall, Spring
Varies	3	History/Social and Behavioral Science	Fall, Spring, Summer

Area V: Pre-Professional

Additional Requirements 28 credits

Course Number	Credits	Course Name	Semester Usually Offered
FYE 101S or HON 101	1	Charger Success - Science or Introduction to Honors Research	Fall
CM 113	3	Public Speaking	Fall, Spring, Summer
MA 172	4	Calculus II	Fall, Spring, Summer
MA 201	4	Calculus III	Fall, Spring, Summer
BYS 119/121	3/1	Principles of Biology + Lab	Fall, Spring, Summer
BYS 219/221	3/1	Organismal Biology + Lab	Fall, Spring, Summer
BYS 219/221	3/1	Genetics and Evolution + Lab	Fall, Spring
BYS 300/300L	4	Cell & Developmental Biology + Lab	Fall, Spring, Summer

Major Requirements

Chemistry Core 22 credits

Course Number	Credits	Course Name	Semester Usually Offered
CH 121/125	3/1	General Chemistry I + Lab	Fall, Spring, Summer
CH 123/126	3/1	General Chemistry II + Lab	Fall, Spring, Summer
CH 223/224	3/1	Quantitative Analysis + Lab	Fall, Spring
CH 331/335	3/1	Organic Chemistry I + Lab	Fall, Spring, Summer
CH 332	3	Organic Chemistry II	Fall, Spring, Summer
CH 401	3	Inorganic Chemistry	Fall

Environmental Chemistry Concentration Requirements 17-19 credits

Course Number	Credits	Course Name	Semester Usually Offered
CH 341	3	Physical Chemistry I	Fall
CH 342	3	Physical Chemistry II	Spring
CH 345	1	Experimental Physical Chemistry I	Fall
CH 361/362	3/1	General Biochemistry I + Lab	Fall, Spring
CH 402	1	Inorganic Chemistry Lab	Spring
CH 421/422	3/1	Instrumental Analysis + Lab	Fall
CH 491, 492, or 493	1-3	Intro to Chemical Research	Fall, Spring, Summer

Minor Requirements

Required Atmospheric Science Minor 21 credits

Course Number	Credits	Course Name	Semester Usually Offered
AES 103/103L	4	Environmental Earth Science + Lab	Fall, Spring
AES 104/104L	3	Weather & Climate Change + Lab	Fall, Spring
AES 212/212L	3	Severe Weather Analysis + Lab	Spring
AES 301	3	Intro to Earth & Atmospheric Physics	Spring
Varies	3	AES 300+ or 400+ course	Fall, Spring
Varies	3	AES 300+ or 400+ course	Fall, Spring

General Electives

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.

Graduation Requirements

- Minimum of 120 credits required for graduation
- At least 36 credits must be completed at the 300 level or higher
- All prerequisite courses must be completed with a grade of C- or higher
- The UAH Catalog is the final authority for all degree requirements

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Charger Foundations Choices

Freshman Composition	Choose 1	College Writing I & II (EH 101 + 102) Accelerated College Writing (EH 103; equivalent to EH 101 & EH 102) Honors English Seminar (EH 105; equivalent to EH 101 & EH 102)
Fine Arts	Choose 1	Ancient & Medieval Art (ARH 100) Renaissance to Modern Art (ARH 101) World Art (ARH 103) Drawing: Foundations (ARS 160) Intro to Film Studies (FMA 1230) Intro to Music Literature (MU 100) Theatre Appreciation (TH 122)
Literature	Choose 1 or 2	Readings in Literature & Culture I (EH 207) Readings in 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 or 2 One must be Public Speaking	Ancient & Medieval Art (ARH 100) Renaissance to Modern Art (ARH 101) World Art (ARH 103) Drawing: Foundations (ARS 160) Intro to Film Studies (FMA 123) Intro to Music Literature (MU 100) Theatre Appreciation (TH 122) Ancient & Medieval Worlds (AMS 229) Public Speaking (CM 113) Intro to Philosophy (PHL 101) Intro to Ethics (PHL 102) Intro to Logic (PHL 103) Tech, Science, & Human Values (PHL 150) Intro to Women's Studies (WGS 200) Foreign Language (WLC 101) International Cinema (WLC 204)
Mathematics	Choose 1	Calculus I with Foundations A & B (MA 150 & MA 151) or Calculus I (MA 171 or MA 171S)
Natural Sciences (Lab) Sequence	Required	Physics with Calculus I + Lab (PH 111/114) Physics with Calculus II + Lab (PH

		112/115)
History	Choose 1 or 2	World History to 1500 (HY 103) World History since 1500 (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) Intro to American Government (PSC 101) Intro to Comparative Politics (PSC 102) Intro to International Relations (PSC 260) General Psychology I (PY 101) Life-Span Development (PY 201) Intro to Sociology (SOC 100) Intro to Criminology (SOC 103) Intro Justice & Equity Studies (JES 200)

Students must take one literature and one history course. Students must also take either a second literature or history course to complete a sequence.

Atmospheric Science Elective Choices

Choose 2

- Classification & Physical Causes of Climate (AES 303)
- Pollution Problems (AES 321)
- Dynamic Meteorology (AES 351)
- Synoptic Meteorology (AES 352)
- Scientific Programming for AES (AES 409)
- Operational Weather Forecasting (AES 410)
- Elements of Statistical Analysis (MA 281)
- Intro Atmospheric Chem & Air Pollution (AES 420)
- Atmos Thermodynamics & Cloud Physics (AES 441)
- Atmospheric Fluid Dynamics I (AES 451)
- Forecasting Mesoscale Processes (AES 454)
- Atmospheric Radiation I (AES 461)
- Radar Meteorology (AES 471)