

Bachelor of Science Degree in Hydrology and Atmospheric Sciences (**HAS major, EHY Track**)
Departmental Advisor Grid ☞ Catalog **AY2025-2026**

FALL			COMMON FRESHMAN CORE			SPRING		
	LANG Req	4	2 nd Semester Language Req		MATH 129	3	Calculus II	
	MATH122A	5	Functions for Calculus		CHEM152	4	General Chemistry II	
	MATH 122B		1 st Semester Calculus					
	CHEM151³	4	General Chemistry I (<i>GE Core: Exploring Perspectives (EP) – Natural Scientist</i>)		GEOS 251	4	Physical Geology	
	ENGL 101	3	First-Year Composition I		ENGL 102	3	First-Year Composition II	
					HWRS 195a	1	Careers in HAS	
					GE Core³	1	<i>Entry Course: Intro to General Education (GE) Experience</i>	
TOTAL 16				TOTAL 16				

SOPHOMORE YEAR				SPRING			
	MATH 223	4	Vector Calculus		Water Quality Theme	3	<i>Choose from: HWRS 417a (preferred), CHEE 476, ENVS 462, WSM 468</i>
	HWRS 350	4	Principles of Hydrology		MATH 254	3	Intro Ordinary Diff Equations
	PHYS 141	4	Introduction to Mechanics		CE 218	3	Mechanics of Fluids
	GE Core³	3	<i>GE Core: EP- Social Scientist</i>		Tech Writing & Comms Theme	3	<i>ENVS 408, ENVS 415, JOUR 455, JOUR 472, ENGL 313, ENGL 308</i>
					PHYS 143	2	Intro Optics-Thermodynamics
TOTAL 15				TOTAL 14			

FALL			JUNIOR YEAR			SPRING		
	HWRS 431	4	Hydrogeology		SIE 305	3	Intro to ENGR Probability & Statistics	
	Tech Elec¹	3	<i>Elective:</i>		GEOS 304	4	Structural Geology [OR GEOS 302]	
	CE 427²	3	Comp App Hydraulics [OR other HAS Elective]		GE Core³	3	<i>GE Core: Building Connections</i>	
	GE Core³	3	<i>GE Core: EP - Humanist</i>		CE 423	3	Hydrology	
	Comp Elec Theme	3	<i>Choose from: HWRS 401, CSC 250, HWRS 428, RNR 403, RNR 417, BE 485</i>		HWRS Elec.	3	<i>Choose from any Tech Elec., HAS Elec. or Computational Elec.</i>	
TOTAL 16				TOTAL 16				

FALL			SENIOR YEAR			SPRING		
	HWRS 443A	3	Risk Assess for Env. Sys		GE Core³	3	<i>GE Core: Building Connections</i>	
	ATMO 436a	3	Fund. of Atmos Sciences		HWRS 449	3	Statistical Hydrology	
	HWRS 498²	2	Senior Capstone (OR other HAS Elective)		HWRS 482²	3	Groundwater Modeling [OR other HAS Elective]	
	GE Core³	3	<i>GE Core: EP - Artist</i>		HWRS 498²	2	Senior Capstone 2nd semester	
	Water Policy, Law, or Econ Elective Theme	3	<i>Choose from: GEOG 468; AREC 479; POL 481; RNR 485; PA 484; LAW 454; RNR 480</i>		Subsurface theme	3	<i>Choose from: HWRS 518 when qualified or ENVS 470</i>	
	GE Core³	3	<i>GE Core: Building Connections</i>		GE Core³	1	<i>Exit Course: GE Portfolio Course</i>	
TOTAL 17				TOTAL 15				

100% Engagement course, notation on transcript

Highlighted classes indicate courses that are **possible** to transfer from other academic institutions. A maximum of 64 units may be transferred and applied to a UA BS degree. Check with your advisor to ensure classes will transfer and fulfill degree requirements.

¹ TECHNICAL ELECTIVE options. Complete 3 units of coursework. Tech elective courses may not be prerequisite to or equivalent to any required course. Students who wish to emphasize in Groundwater may apply course to undergraduate certificate. See advisor for approval before enrolling. **Tech Elective options include:**

- **Surface Water** – CE 427, RNR 417, CE 214, CE 323. (**CE 214** and 323 are exceptions to prerequisite/equivalent rule.)
- **Groundwater** – HWRS 482, HWRS 405, GEOS 302, GEOS 304, GEOS Elective, or HWRS 518 for advanced students who meet eligibility requirements.
- **Water Quality** – HWRS 480, CHEM 241a, MIC 205A & L after taking MIC 181R, WSM 468, CHEE 476, CHEE 370r
- **Water Resources** – POL 481, ENVS 444, ENVS 454, HWRS 520, for advanced students who meet eligibility requirements.
- **Atmospheric Science** – ATMO 469A, ATMO 469B, GEOS 412A, GEOS 479, GEOS 437, GEOS 478, GEOS 483, MATH 313, PHYS 241

Additional electives in these categories may be available **with advisor approval**.

² HAS MAJOR ELECTIVES (Advanced Courses in HAS) – Complete 3 courses: (1) HWRS 482; (2) GEOS 450; (3) **HWRS 498**; (4) CE 427; [5] RNR 403, 417, or 420; (6) ATMO 451B; (7) ATMO 455; (8) ATMO 421 or GEOG 430. Consult [Catalog](#) and [Schedule of Classes](#) for semester of offering! The instructor must approve the Senior Capstone topic ≥ semester prior to enrollment; Honors students may complete an approved Senior Honors Thesis in lieu of the Senior Capstone course.

³ General Education Core must meet University requirements. At least 12 units of Exploring Perspectives and 9 units of Building Connections are required. Exploring Perspectives must include 1 Natural Scientist focus, 1 Social Scientist focus, 1 Humanist focus, and 1 Artist focus class. Transfer Students may not need the entry/exit 1-unit courses.