ENVIRONMENTAL SCIENCE, B.S.

Juneau

UAS Environmental Science students are at the forefront of studying environmental processes and challenges in coastal Alaska and beyond. Real-world experience is a hallmark of our program, which takes advantage of the stunning natural laboratory, extending from the Juneau Icefield to the lush coastal rainforest that surrounds our campus. Program faculty are engaged in cutting edge research that crosses disciplines and offers program students valuable opportunities for hands-on research training. Graduates from our program are well prepared for graduate school or to enter the work force and tackle complex environmental issues in the public and private sectors.

Admission Requirements

Students are admitted to the program after declaring an Environmental Science major and will then be assigned an academic advisor. Students should consult with their advisor for course selection and sequencing.

Candidates must complete all UAS General Education Requirements (GERs) (http://catalog.uas.alaska.edu/general-education-requirements/), the Alaska Native Knowledge Graduation Requirement (http://catalog.uas.alaska.edu/certificate-degree-programs/bachelors-degrees/#alaskanativeknowledgegraduationrequirementtext), and the specific program requirements listed below for a minimum of 120 credit hours. Major requirements can be used to satisfy the Lab Science, Non-Lab Science, and Math GERs. 42 of the 120 credit hours must be at the upper-division level (300 or above), of which 24 must be completed at UAS.

Requirement	Hours
Minimum Credit Hours	**120**
General Education Requirements	36
Alaska Native Knowledge Graduation Requirement	3
Program on the Environment Core	9
Major Requirements	36
Environmental Processes	17
Quantitative and Spatial Analysis	8
Electives	26

Code	Title	Credits
General Education Requirements		
Complete all General Education Requirements. The Lab Natural Science, Non-lab Natural Science, and Math GERs are satisfied by degree requirements.		
Program on the Environment Core		
ENVI S120	*Cultures and Environments	3
ENVS S102	*Earth and Environment	4
Select at least 2 credits of capstone experience:		
ENVS S491	Environmental Science Internship	
ENVS S492	Environmental Careers Seminar	
ENVS S498	Research in Environmental Science	
Major Requirements		
CHEM S105	*General Chemistry I	3
CHEM S105L	General Chemistry I Laboratory	1
CHEM S106	*General Chemistry II	3
CHEM S106L	General Chemistry II Laboratory	1
ENVS S375	Current Topics in Earth and Ecosystem Research [1]	2
ENVS S422	Earth's Climate System	3
GEOL S104	*Physical Geology	4
GEOL S302	Hydrology	4
MATH S251	*Calculus I [2]	4
STAT S200	*Elementary Statistics	3
Select one of the following Physics sequences:		8
PHYS S123 & PHYS S124	*College Physics I and *College Physics II	
PHYS S211 & PHYS S212	*General Physics I and *General Physics II	
Environmental Processes		
Select 17 credits of the following:		17
BIOL S349	Biological Oceanography	3
CHEM S321	Organic Chemistry I	4
CHEM S325	Organic Chemistry II	4
CHEM S350	Environmental Chemistry	4
ENVI S210	Temperate Rainforest Ecosystems	3
ENVI S313	Sustainable Resource Management	3
ENVI S350	Interdisciplinary Perspectives on Climate Change	3
ENVS S302	Glaciology	3
ENVS S380	Natural Disasters	3
ENVS S407	Snow Hydrology	4
ENVS S414	Biogeochemistry	3
ENVS S416	Biogeography and Landscape Ecology	4
ENVS S475	Field Studies in Environmental Science [1]	1-4
ENVS S496	Juneau Icefield Research Program	6
GEOL S301	Geomorphology	4
GEOL S320	Mineral, Energy, and Renewable Resources	3
Quantitative and Spatial Analysis		
Select eight credits of the following:		8
BIOL S355	Experimental Design and Data Analysis	4
ENVS S111	Introduction to Differential GPS	1

ENVS S309	Mobile GIS Technology and Applications	2
ENVS S338	Introduction to Geographic Information Systems (GIS)	3
ENVS S406	Remote Sensing	3
ENVS S410	Advanced Geographic Information Systems	3
MATH S252	*Calculus II	4
STAT S400	Statistical Computing with R	2
STAT S401	Regression and Analysis of Variance	4
Electives		
Include upper division courses as needed to meet 42 upper division credits required for degree.		26

[1] May be repeated once for credit when topics vary
[2] Prerequisites include MATH S151, S152

Upon completion, students will be able to:

1. Describe the fundamental components and interactions of Earth systems, environments, and social systems, including an understanding of their relevance to Southeast Alaska.
2. Use research techniques to investigate Earth systems and environmental problems.
3. Use diverse written and oral communication skills to effectively communicate environmental issues.