BIOLOGY, B.A.

Juneau

The B.A. degree in Biology provides students with the opportunity to learn biological principles and skills in lecture, laboratory and field courses with a breadth in liberal arts and sciences. Students have the option to choose a Fisheries Science Emphasis or to pursue General Electives. Program assessment plans and student learning outcomes are posted on the Program Assessment website (https://uas.alaska.edu/provost/academic-affairs/assessment/).

Admission Requirements

Applicants enter as pre-majors and will be considered for full admission to the B.A. in Biology after completion of the following:

Code	Title	Credits
BIOL S115 & BIOL S116	*Fundamentals of Biology I and *Fundamentals of Biology II	8
MATH S151	*College Algebra for Calculus [1]	4
WRTG S111	*Writing Across Contexts	3
High school chemistry, or a C (2.00) or higher in either CHEM S103 or CHEM S105.		

[1] May be met by placement examination.

When a student becomes a major in Biology, they are assigned a faculty advisor. The student and faculty advisor plan the student's curriculum, and the advisor's signature is required on registration documents.

Candidates must complete the 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), as well as the specific program requirements listed below for a minimum of 120 credit hours. Courses in a degree program may be counted only once. Courses used to fulfill the major requirements cannot be used to fulfill the GERs. Specific requirements for GERs are listed below. The degree must include 44 credits of upper-division (300 or above) courses. To satisfy the residency requirement, 30 credits must be completed at UAS, including 24 upper division credits.

Requirement	Hours
Minimum Credit Hours	**120**
General Education Requirements	36
Alaska Native Knowledge Graduation Requirement	3
Major Requirements	36
Biology Electives	10
General Electives	38

Code	Title	Credits
General Education Requirements		
Complete all General Education Requirements which must include the following:		36
BIOL S115	*Fundamentals of Biology I	
BIOL S116	*Fundamentals of Biology II	
MATH S151	*College Algebra for Calculus	
Major Requirements		
BIOL S271	Ecology	4
BIOL S310	Animal Physiology [2]	4
BIOL S362	Genetics	4
BIOL S482	Evolution	4
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
MATH S152	*Trigonometry (or higher) [1]	3
STAT S200	*Elementary Statistics	3
Select six credits from at least two disciplines in the following:		6
ENVS S102	*Earth and Environment (or higher)	
GEOL S104	*Physical Geology (or higher)	
PHYS S165	*Introduction to Astronomy	
STAT S373	Probability and Statistics (or higher)	
Biology Electives		
Select 10 credits of the following:		10
BIOL S215	Introduction to Marine Biology	
BIOL S239	Introduction to Plant Biology	
BIOL S311	Communicating Science	
BIOL S349	Biological Oceanography	
BIOL S353	Tropical Marine and Coastal Ecology	
BIOL S355	Experimental Design and Data Analysis	
BIOL S373	Conservation Biology	
BIOL S375	Current Topics in Biology: [3]	
BIOL S380	Marine Ornithology and Herpetology	
BIOL S384	Marine Mammalogy	
BIOL S396	Field Studies in Behavior and Ecology [4]	
BIOL S398	Individual Research [4]	
or BIOL S498	Research in Biology	
BIOL S405	Invertebrate Zoology	
BIOL S410	Physiology of Marine Animals	
BIOL S427	Introduction to Ichthyology	
BIOL S441	Animal Behavior	
BIOL S480	Aquatic Pollution	
BIOL S481	Marine Ecology	
BIOL S492	Biology Seminar [3]	

All Biology students have the option of pursuing a Fisheries Science Emphasis, which will satisfy up to 21 of the 38 General Elective requirements.

Fisheries Science Emphasis Requirements		**19-21**
Must include 13 credits:		
BIOL S110	Introduction to Marine Fisheries Science [5]	
BIOL S427	Introduction to Ichthyology	
FISH F288	(Fish and Fisheries of Alaska) [5]	
FISH F487	(Fisheries Management) [5]	
Select two additional electives in BIOL (UAS) or FISH (UAF) with advisor permission (6-8 credits).		
General Electives		**up to 38**
To include upper-division courses as needed to meet 44 upper division credits required for degree.		

1 Course credit may vary for higher level Math courses.
2 Or any Upper Division Chemistry Course (4 credits).
3 Only 4 credits from BIOL S375 and 2 credits from BIOL S492 may be applied toward the Biology electives. Others may be applied toward General Electives.
4 Up to 6 credits total from BIOL S396/398/498 may be applied.
5 May be applied toward the Biology Electives and General Electives for students not pursuing the emphasis.
FISH courses available from UAF distance or face-to-face at the Lena Point SFOS facility.

1. Students will gain a broad background in biological sciences.
2. Students will develop critical thinking skills.
3. Students will improve oral and written scientific communication skills.
4. Students will gain practical experiences in basic biological research.