MATHEMATICS, B.S.

Juneau

The Bachelor of Science in Mathematics provides a solid foundation in mathematics. In addition to taking the core and interdisciplinary courses, students will also take part in a seminar dedicated to undergraduate research during their last two years. After obtaining the degree, students will have opportunities in secondary education, graduate studies and direct entry into the job market. Each student will be advised by faculty to achieve a specific program tailored for the student's goals. Additional information may be found at https://uas.alaska.edu/arts_sciences/naturalsciences/math/index.html (https://uas.alaska.edu/arts_sciences/naturalsciences/math/).

Admission Requirements

Applicants will be considered for full admission to the BS program with a GPA of 2.00 or better and after completion of the following with a grade of C (2.00) or better:

Code	Title	Credits
MATH S151	*College Algebra for Calculus (or higher)	4
WRTG S111	*Writing Across Contexts	3

Candidates must complete the General Education Requirements (GER) (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 GER. The degree must include 42 upper division (300 or above) credits, 24 of which must be completed at UAS.

Requirement	Hours
Minimum Credit Hours	**120**
General Education Requirements	35
Alaska Native Knowledge Graduation Requirement	3
Major Requirements	43
Electives/Minor	42

Code	Title	Credits
General Education Requirements		
Complete all General Education Requirements. Must include both PHYS S123 and PHYS S124, or both PHYS S211 and PHYS S212.		35
Major Requirements		
MATH S251	*Calculus I	4
MATH S252	*Calculus II	4
MATH S253	*Calculus III	4
MATH S265	Introduction to Mathematical Proofs	3
MATH S302	Differential Equations	3
MATH S314	Linear Algebra	3
MATH S392	Junior Seminar [1]	2
MATH S401	Introduction to Real Analysis	3
MATH S405	Abstract Algebra	3
MATH S492	Senior Seminar [1, 2]	2
STAT S200	*Elementary Statistics	3
Select nine credits from the following: [4]		9
MATH S305	Geometry	
MATH S410	Complex Variables	
MATH S411	History of Mathematics	
MATH S460	Mathematical Modeling	
STAT S373	Probability and Statistics [3]	
STAT S400	Statistical Computing with R	
STAT S401	Regression and Analysis of Variance	
Electives/Minor		**42**
Credits applied here must include upper division courses as needed. Students are strongly encouraged to choose from one or more of the following options: Study further topics in the mathematical sciences; explore interdisciplinary applications of mathematics to the sciences, social sciences, or business; take courses in preparation for graduate programs in teacher education; earn minors in one or more additional disciplines; or earn a double major in Mathematics and one of Biology, Marine Biology, Environmental Science, or Environmental Resources.		
Total Credits		**120**

1. Two semesters of MATH S392 and two semesters of MATH S492 are required.
2. As part of the Senior Seminar, all majors are required to complete an advisor approved undergraduate research capstone project that involves the submission of a paper and an oral presentation of the paper.
3. STAT S373 may be substituted for STAT S200 or used as a MATH/STAT elective, but not both.
4. Other advisor approved upper division mathematics or statistics may be used.

Upon completion, students will be able to:

1. Demonstrate competency in core subject content.
2. Demonstrate skills in analysis, application, and technology utilization.
3. Demonstrate skills in the comprehension and communication of mathematical ideas.
4. Demonstrate professionalism and independence.