Mathematics
College of Natural Science and Mathematics
Department of Mathematical Sciences
(907) 474-7332
www.dms.uaf.edu

B.A., B.S. Degrees
Minimum Requirements for Degrees: 120 credits

1. Complete the following pre-major requirement:
   a. Students must be ready to matriculate into MATH 200, before they will be allowed to declare mathematics as their major.

2. Complete the general university requirements (page 107).

3. Complete the B.A. or B.S. degree requirements. (See page 111 or 112. As part of the B.S. degree requirements, complete PHYS 103X and PHYS 104X, or PHYS 211X and PHYS 212X.)

4. Complete the following program (major) requirements:* 
   MATH 200X—Calculus** .........................................................4
   MATH 201X—Calculus ............................................................4
   MATH 202X—Calculus ............................................................4
   MATH 215—Introduction to Mathematical Proofs ......................2
   MATH 305W—Abstract Algebra .............................................3
   MATH 314—Linear Algebra ....................................................3
   MATH 401W—Advanced Calculus .......................................3
   MATH 490O—Senior Seminar ..............................................1

5. Complete 21 credits of an elective package. The following are suggested elective packages:**
   a. Pure math electives:
      MATH 305—Geometry .......................................................3
      MATH 307—Discrete Mathematics ......................................3
      MATH 402—Advanced Calculus .........................................3
      MATH 404W—Topology .....................................................3
      Approved electives ..........................................................9
   b. Applied math electives:
      MATH 302—Differential Equations ....................................3
      MATH 421—Applied Analysis ............................................3
      MATH 422—Introduction to Complex Analysis ....................3
      MATH 460WO—Mathematical Modeling ................................3
      Approved electives ..........................................................3
      Complete 2 of the following:
      MATH 307—Discrete Mathematics ......................................3
      MATH 310—Numerical Analysis .........................................3
      MATH 402—Advanced Calculus .........................................3
      STAT 300—Statistics ........................................................3

6. Minimum credits required ...................................................120

* Student must earn a C grade or better in each course.
** Satisfies core or B.A. or B.S. degree requirements.
*** An elective package must be approved by a mathematical sciences advisor and must include at least 12 credits at the 300-level or above. Students who are obtaining a single B.S. or B.A. with mathematics as a second major may substitute up to 9 credits of approved courses with strong mathematical content for mathematics electives.
**** We strongly recommend that prospective secondary science teachers seek advising from the UAF School of Education early in your undergraduate degree program, so that you can be appropriately advised of the state of Alaska requirements for teacher licensure. You will apply for admission to the UAF School of Education's post-baccalaureate teacher preparation program, a one-year intensive program, during your senior year.

Minor
1. Complete the following:
   Math 200X—Calculus ..........................................................4
   Math 201X—Calculus ..........................................................4
   Math 202X—Calculus ..........................................................4
   At least 9 additional credits from MATH 215, STAT 300, any 300- or 400-level MATH course; or electives approved by mathematics advisor ..........................................................9

2. Minimum credits required ...................................................21

Note: Courses completed to satisfy this minor can be used to simultaneously satisfy other major or general distribution requirements.

Note: Page numbers refer to the UAF 2005-2006 academic catalog, which can be viewed online at www.uaf.edu/catalog/.
Baccalaureate Core Requirements
All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.

COMMUNICATION (9)
Complete the following:
ENGL 111X .................................................................(3)

Complete one of the following:
ENGL 211X OR ENGL 213X .......................................(3)

Complete one of the following:
COMM 131X OR COMM 141X ...............................(3)

PERSPECTIVES ON THE HUMAN CONDITION (18)
Complete all of the following four courses:
ANTH 100X/SOC 100X .............................................(3)
ECON 100X OR PS 100X ...........................................(3)
HIST 100X .................................................................(3)
ENGL/FL 200X ...........................................................(3)

Complete one of the following three courses:
ART/MUS/THR 200X, HUM 201X OR ANS 202X .......(3)

Complete one of the following six courses:
BA 323X, COMM 300X, JUST 300X, NRM 303X,
PS 300X OR PHIL 322X ............................................(3)

OR complete 12 credits from the above courses PLUS
• two semester-length courses in a single Alaska Native language or other non-English language OR
• three semester-length courses (9 credits) in American Sign Language taken at the university level.

MATHEMATICS (3)
Complete one of the following:
MATH 107X, MATH 161X OR MATH 103X ..............(3–4)

* No credit may be earned for more than one of MATH 107X or 161X.

OR complete one of the following:
MATH 200X, MATH 201X, MATH 202X,
MATH 262X OR MATH 272X .........................................(4)

* Or any math course having one of these as a prerequisite

NATURAL SCIENCES (8)
Complete any two (4-credit) courses:
ATM 101X ...............................................................(4)
BIOL 100X .............................................................(4)
BIOL 103X .............................................................(4)
BIOL 104X .............................................................(4)
BIOL 105X .............................................................(4)
BIOL 106X .............................................................(4)
BIOL 111X .............................................................(4)
BIOL 112X .............................................................(4)
CHEM 100X ...........................................................(4)
CHEM 103X ...........................................................(4)
CHEM 104X ...........................................................(4)
CHEM 105X ...........................................................(4)
CHEM 106X ...........................................................(4)
GEOG 205X ...........................................................(4)
GEOS 100X ...........................................................(4)
GEOS 101X ...........................................................(4)
GEOS 112X ...........................................................(4)
GEOS 120X ...........................................................(4)
GEOS 125X ...........................................................(4)
MSL 111X ...............................................................(4)
PHYS 102X .............................................................(4)
PHYS 103X .............................................................(4)
PHYS 104X .............................................................(4)
PHYS 115X .............................................................(4)
PHYS 116X .............................................................(4)
PHYS 175X .............................................................(4)
PHYS 211X .............................................................(4)
PHYS 212X .............................................................(4)
PHYS 213X .............................................................(4)

LIBRARY AND INFORMATION RESEARCH (0–1)
Successful completion of library skills competency test OR
LS 100X or 101X prior to junior standing .................(0–1)

UPPER-DIVISION WRITING AND ORAL COMMUNICATION (0)
Complete the following:
Two writing intensive courses designated (W) ..........(0)
One oral communication intensive course designated (O) ... (0)
OR two oral communication intensive courses designated (O/2), at the upper-division level (see degree and/or major requirements) ......(0)

TOTAL CREDITS REQUIRED .......................................... 38–39