Marine Science

School of Fisheries and Ocean Sciences
907-474-7824
www.sfos.uaf.edu/academics/

Minor only

Though the marine science minor is available to students in all degree programs, fisheries students will particularly benefit from the breadth this minor offers. The program will also appeal to students from other disciplines (e.g., political science, earth sciences, biology and wildlife, environmental science, resource management, and education) in which possible career paths may require and/or benefit from training in marine science (policy-making, resource management, education, the seafood industry, etc.).

Students who complete the minor in marine science will possess a knowledge base and skill set that will make them more competitive for a wide variety of agency and organization positions, particularly within the state of Alaska. The education and training will be applicable to jobs within government management agencies such as the Alaska Department of Fish and Game and the U.S. Fish and Wildlife Service, as well as Alaska Native organizations, non-profit conservation organizations, the seafood industry, or in other policy development, fisheries, education, or outreach capacities.

1. Complete the following:
   - MSL F211—Introduction to Marine Science I ..............................................3
   - MSL F212—Introduction to Marine Science II ..........................................3
   - MSL F213L—Marine Science Laboratory ..................................................1

2. Complete 6 credits from the following:
   - MSL F317—Introduction to Marine Mammal Biology ............................3
   - MSL F330—The Dynamic Alaskan Coastline ........................................3
   - MSL F403—Estuaries Oceanography ....................................................2
   - MSL F412—Early Life Histories of Marine Invertebrates .......................3
   - MSL F421—Field Course in Subtidal Studies ..........................................2
   - MSL F431—Polar Marine Science ..........................................................3
   - MSL F449—Biological Oceanography ...................................................3
   - MSL F450—Marine Biology and Ecology Field Course ..........................4
   - MSL F456—Kelp Forest Ecology ............................................................4
   - MSL F463—Chemical Coastal Processes .................................................3
   - MSL F473—Limnology .........................................................................4

3. Complete 2 additional credits from the following:
   - **Marine Science and Limnology**
     - MSL F220—Scientific Diving ...............................................................2
     - MSL F317—Introduction to Marine Mammal Biology .........................3
     - MSL F330—The Dynamic Alaskan Coastline ......................................3
     - MSL F403—Estuaries Oceanography ....................................................2
     - MSL F412—Early Life Histories of Marine Invertebrates .......................3
     - MSL F421—Field Course in Subtidal Studies ..........................................2
     - MSL F431—Polar Marine Science ..........................................................3
     - MSL F449—Biological Oceanography ...................................................3
     - MSL F450—Marine Biology and Ecology Field Course ..........................4
     - MSL F456—Kelp Forest Ecology ............................................................4
   - **Fisheries**
     - FISH F288/BIOL F288—Fish and Fisheries of Alaska .........................3
     - FISH F301—Biology of Fishes ...............................................................3
     - FISH F425—Fish Ecology .....................................................................3
     - FISH F440—Oceanography for Fisheries ..............................................3
   - **Biology and Wildlife**
     - BIOL F305—Invertebrate Zoology ........................................................5
     - BIOL F473—Limnology .........................................................................4
   - **Economics**
     - ECON F235—Introduction to Natural Resource Economics ..................3

4. Minimum credits required .................................................................15
All degrees (e.g. B.A., B.S., etc.) require additional courses. Refer to specific degree and program requirements.

**Baccalaureate Core Requirements**

*Note: all courses for Core must be at C- or higher.*

**COMMUNICATION (9)**

**Complete the following:**

- ENGL F111X ...........................................(3)
  
  *ENGL F190H may be substituted.*

**Complete one of the following:**

- ENGL F211X OR ENGL F213X ..........................(3)

**Complete one of the following:**

- COMM F131X OR COMM F141X ..........................(3)

**PERSPECTIVES ON THE HUMAN CONDITION (18)**

**Complete all of the following four courses:**

- ANTH F100X/SOC F100X ..................................(3)
  
- ECON F100X OR PS F100X ..............................(3)
  
- HIST F100X .............................................(3)
  
- ENGL/FL F200X ........................................(3)

**Complete one of the following three courses:**

- ART/MUS/THR F200X, HUM F201X OR ANS F202X ... (3)

**Complete one of the following six courses:**

- BA F323X, COMM F300X, JUST F300X, NRM F303X,
  
- PS F300X OR PHIL F322X .................................(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 F103X, MATH F107X, MATH F161X OR
  
- STAT F200X ..............................................(3 – 4)

  *No credit may be earned for more than one of MATH F107X or F161X.*

**OR complete one of the following:**

- MATH F200X, MATH F201X, MATH F202X,
  
- MATH F262X OR MATH F272X ...........................(4)

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

**NATURAL SCIENCES (8)**

**Complete any two (4-credit) courses:**

- ATM F101X ...............................................(4)
  
- BIOL F100X ..............................................(4)
  
- BIOL F103X ..............................................(4)
  
- BIOL F104X ..............................................(4)
  
- BIOL F111X ..............................................(4)
  
- BIOL F112X ..............................................(4)
  
- BIOL F115X ..............................................(4)
  
- BIOL F116X ..............................................(4)
  
- CHEM F100X ............................................(4)
  
- CHEM F103X ............................................(4)
  
- CHEM F104X ............................................(4)
  
- CHEM F105X ............................................(4)
  
- CHEM F106X ............................................(4)
  
- CHEM F108X ............................................(4)
  
- GEOL F111X ............................................(4)
  
- GEOS F100X ............................................(4)
  
- GEOS F101X ............................................(4)
  
- GEOS F112X ............................................(4)
  
- GEOS F120X ............................................(4)
  
- GEOS F125X ............................................(4)
  
- MSL F111X ................................................(4)
  
- PHYS F102X ............................................(4)
  
- PHYS F103X ............................................(4)
  
- PHYS F104X ............................................(4)
  
- PHYS F115X ............................................(4)
  
- PHYS F116X ............................................(4)
  
- PHYS F117X ............................................(4)
  
- PHYS F211X ............................................(4)
  
- PHYS F212X ............................................(4)
  
- PHYS F213X ............................................(4)

**LIBRARY AND INFORMATION RESEARCH (0 – 1)**

Successful completion of library skills competency test OR LS F100X or F101X prior to junior standing ..........(0 – 1)

**UPPER-DIVISION WRITING AND ORAL COMMUNICATION (0)**

**Complete the following:**

- Two writing intensive courses designated (W) ..........(0)

  and 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)

**CORE CREDITS REQUIRED .................................... 38 – 39**

Minimum credits required for degree ........................................ 120