

# MARINE SCIENCE

School of Fisheries and Ocean Sciences  
907-474-7824  
[www.sfos.uaf.edu/academics/](http://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, education) in which possible career paths may require and/or benefit from training in marine science (policymaking, 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, nonprofit 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 3 credits from the following:
  - MSL F317—Introduction to Marine Mammal Biology.....3
  - MSL F330—The Dynamic Alaskan Coastline.....3
  - MSL F403—Estuaries Oceanography.....3
  - MSL F412—Early Life Histories of Marine Invertebrates .....3
  - MSL F431—Polar Marine Science.....3
  - MSL F449 – Biological Oceanography .....3
  - MSL F463—Chemical Coastal Processes.....3

3. Complete 5 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 F419—Concepts in Physical Oceanography .....	3
MSL F421—Field Course in Subtidal Studies.....	2
MSL F431—Polar Marine Science.....	3
MSL F440—Oceanography for Fisheries .....	3
MSL F449—Biological Oceanography .....	3
MSL F450—Marine Biology and Ecology Field Course .....	4
MSL F456—Kelp Forest Ecology.....	4
MSL F461—Chemical Oceanography .....	3
MSL F463—Chemical Coastal Processes.....	3
MSL F492—IMS Seminar.....	1
MSL F497—Marine Field Experience (Independent Study) .....	1-2

### Fisheries

FISH F288/BIOL F288—Fish and Fisheries of Alaska .....	3
FISH F425—Fish Ecology .....	3
FISH F440—Oceanography for Fisheries .....	3
FISH/BIOL F427—Ichthyology .....	3

### Chemistry

CHEM F202—Basic Inorganic Chemistry .....	3
CHEM F212—Chemical Equilibrium and Analysis .....	4

### Biology and Wildlife

BIOL F305—Invertebrate Zoology .....	5
BIOL F473—Limnology .....	4

### Economics

ECON F235—Introduction to Natural Resource Economics.....	3
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### Geology and Geophysics

GEOS/GEOG F222—Fundamentals of Geospatial Sciences.....	3
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### Statistics

STAT F200X—Elementary Probability and Statistics.....	3
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4. Minimum credits required .....15