

# Oceanography

School of Fisheries and Ocean Sciences  
Graduate Program in Marine Sciences and Limnology  
(907) 474-7289  
[www.sfos.uaf.edu/academics/about/grad/oceanography/](http://www.sfos.uaf.edu/academics/about/grad/oceanography/)

## M.S., Ph.D. Degrees

Minimum Requirements for Degrees: M.S.: 30 credits;  
Ph.D.: 18 thesis credits

This program offers M.S. degrees in several concentration areas of oceanography: physical, chemical, biological, geological and fisheries. Limnological research projects are also undertaken under the oceanography degree. The Ph.D. degree is offered in oceanography.

Opportunities for laboratory and field work are available through the School of Fisheries and Ocean Sciences include the Institute of Marine Science. These include laboratories at Fairbanks, the Seward Marine Center, Kasitsna Bay, the Juneau Center, and the Fishery Industrial Technology Center at Kodiak. Research vessels operated by the institute and school include the R/V *Alpha Helix*, which has open-ocean capabilities and operates in Alaskan coastal waters, the Gulf of Alaska, and the Bering Sea, and the R/V *Little Dipper*, which operates on day trips in Resurrection Bay. Laboratory facilities include a seawater system at Seward and a variety of modern and analytical instrumentation, including stable isotope mass spectrometers, a gamma spectrometer, a flow cytometer facility, and gas and liquid chromatography equipment. Mainframe and personal computing facilities are readily accessible to graduate students.

Oceanography is both interdisciplinary and multidisciplinary. For both M.S. and Ph.D. oceanography students, research emphasis is on processes influencing the ocean's circulation, composition, biological productivity and geology. Students considering graduate study in oceanography should have a strong background in physics, chemistry, biology, geology or mathematics, and a working familiarity with the other subjects.

## Graduate Program—M.S. Degree

### Concentrations: Biological, Chemical, Fisheries, Geological, Physical

1. Complete the following admission requirement:
  - a. Submit GRE scores.
2. Complete the general university requirements (page 168).
3. Complete the master's degree requirements (page 172).
4. Complete 1 of the following concentrations:  
Biological, Chemical, Geological, Physical
  - a. Complete the following:

|                                       |      |
|---------------------------------------|------|
| MSL 620—Physical Oceanography .....   | 3    |
| MSL 630—Geological Oceanography ..... | 3    |
| MSL 650—Biological Oceanography ..... | 3    |
| MSL 660—Chemical Oceanography .....   | 3    |
| MSL 692—Seminar .....                 | 3    |
| MSL 699—Thesis* .....                 | open |
| Electives* .....                      | open |
  - b. Minimum credits required .....

\* Appropriate to area of concentration

## Fisheries

- a. Complete the following:

|                                       |      |
|---------------------------------------|------|
| MSL 620—Physical Oceanography .....   | 3    |
| MSL 630—Geological Oceanography ..... | 3    |
| MSL 640—Fisheries Oceanography .....  | 3    |
| MSL 650—Biological Oceanography ..... | 3    |
| MSL 660—Chemical Oceanography .....   | 3    |
| MSL 692—Seminar .....                 | 3    |
| MSL 699—Thesis .....                  | open |
| Electives .....                       | open |
- b. Minimum credits required .....

## Graduate Program—Ph.D. Degree

1. Complete the following admission requirement:
  - a. Submit GRE scores.
2. Complete the general university requirements (page 168).
3. Complete the Ph.D. degree requirements (page 172).
4. Complete course work equivalent to M.S. degree.\*
5. Minimum credits required .....

\* There are no fixed course requirements, nor is an M.S. degree required to earn the Ph.D. degree. However, a candidate for the Ph.D. degree in oceanography (biological, chemical, fisheries, geological, and physical oceanography) will be expected to have completed course work at least equivalent to that required for the corresponding M.S. degree.

Note: Students are admitted to the graduate program in marine sciences and limnology on the basis of their ability and the capability of the program to meet their particular interests and needs. Applications are considered throughout the year but students should apply by March 1 to have the best chance for admission and financial support for the subsequent fall semester. Assistantship stipends are awarded competitively and limited fellowship support is available. Most students are supported on research projects that relate directly to their degree research.

Note: Oceanography majors must demonstrate field experience aboard an oceanographic vessel.

Note: Page numbers refer to the UAF 2005-2006 academic catalog, which can be viewed online at [www.uaf.edu/catalog/](http://www.uaf.edu/catalog/).