

# FISHERIES

School of Fisheries and Ocean Sciences  
907-474-7289  
www.sfos.uaf.edu/academics/

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

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

Graduate degree program students attend classes and work with faculty in Juneau and/or Fairbanks. Academic programs can be developed in one of the following subject areas: fisheries management (Juneau and Fairbanks), fish/invertebrate biology (Juneau and Fairbanks) and aquaculture (Juneau). Research assistantships are available. Applicants should contact the fisheries program for further information and application forms.

Fairbanks' geographic location is advantageous for the study of interior Alaska aquatic habitats. A number of subarctic streams and lakes are within easy reach. Main access to the marine environment from the Fairbanks campus is in Prince William Sound and Cook Inlet.

The Juneau Center, School of Fisheries and Ocean Sciences, houses the UAF fisheries science program in southeast Alaska. The Juneau Center has well-equipped labs, including freshwater and seawater wet labs and computer labs. There is ready access to both marine and freshwater habitats. The Juneau Center is located near the Auke Bay National Marine Fisheries Service Laboratory north of Juneau. The Fishery Industrial Technology Center is located in Kodiak. It has new facilities for work in harvest technology, seafood technology, seafood biochemistry and microbiology.

Fisheries students in Fairbanks and Juneau have an opportunity to associate with personnel of federal and state conservation agencies. These agencies often hire students for summer field work.

### Graduate Program — M.S. Degree

- Complete the following admission requirements:
  - Prerequisites: calculus, elementary statistics, ichthyology or invertebrate zoology and computer competency.
  - Submit GRE scores.
- Complete the general university requirements (page 198).
- Complete the master's degree requirements (page 202).
- Complete the following:
 

FISH F699—Thesis.....	6 – 12
STAT F401—Regression and Analysis of Variance .....	4

 Students must complete one of the following courses under each area:
 

Biology and ecology of fish and shellfish	
BIOL F415/MSL F615—Physiology of Marine Organisms .....	3
FISH F425—Fish Ecology .....	3
FISH F426/FISH F626—Behavioral Ecology of Fishes.....	3
FISH F428/FISH F628—Physiological Ecology of Fishes .....	3
FISH F633—Pacific Salmon Life Histories .....	3
FISH F650—Fish Ecology .....	3
FISH F651—Fishery Genetics .....	4
MSL F640—Fisheries Oceanography .....	4
MSL F652—Marine Ecosystems .....	3

- |   |   |
|---|---|
| Quantitative population dynamics of fish and shellfish    |   |
| FISH F421—Fisheries Population Dynamics .....             | 4 |
| FISH F601—Quantitative Fisheries Science.....             | 3 |
| FISH F621—Estimation of Fish Abundance .....              | 3 |
| FISH F622—Quantitative Fish Population Dynamics II .....  | 3 |
| Management and human dimensions of fisheries              |   |
| FISH F411—Human Dimensions of Environmental Systems ..... | 3 |
| FISH F487—Fisheries Management .....                      | 3 |
| FISH F640—Management of Renewable Resources.....          | 3 |
| FISH F675—Political Ecology of the Oceans.....            | 3 |
| Graduate seminars .....                                   | 2 |

- Minimum credits required.....30  
*Note: Students working in subject areas involving significant non-English literature may be expected to read the appropriate foreign language.*  
*Note: Only 9 credits of the required 30 M.S. degree credits can be at the 400-level.*

### Graduate Program — Ph.D. Degree

- Complete the following admission requirement:
  - Complete a master's degree in a fisheries-related field or meet the requirements as outlined below to be accepted directly into a Ph.D. program without a master's degree.
  - Submit GRE scores.
- Complete the general university requirements (page 198).
- Complete the Ph.D. degree requirements (page 203).
- Complete at least one year of full-time course work, as approved by the student's advisory committee.
- Complete a thesis.
- Minimum credits required.....18

### Admission to Ph.D. program directly from bachelor's program:

Entering graduate students whose highest earned degree is the baccalaureate are normally admitted as master of science candidates. However, exceptionally able and accomplished students in this category are eligible for direct admission to the Ph.D. program. Criteria for direct admission to the Ph.D. program from the baccalaureate are:

- Endorsement by proposed chair of graduate advisory committee AND 2 or 3 below.
  - At least one first-authored manuscript published or accepted for publication in a peer-reviewed scientific journal or receipt of an NSF, NIH, or similar prestigious pre-doctoral fellowship. OR
  - Demonstrated research proficiency (e.g. undergraduate thesis, Research Experiences for Undergraduates or other intensive research experience) documented in the application AND either (1) attained a GPA of at least 3.5 at the undergraduate level, or (2) scored at the 80% level in two of three categories in the GRE.
- Students who elect this route must fulfill course requirements as outlined for BOTH the M.S. and Ph.D. degrees. Applicants who do not meet these criteria may enter the graduate program as M.S. candidates, and in exceptional cases may petition for conversion to the Ph.D. program after Advancement to Candidacy (for the M.S.). Such petitions must be approved both by the student's current (M.S.) and proposed (Ph.D.) advisory committee and the department director or designee.

