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

B.A., B.S. Degree
Minimum Requirements for Degrees: B.A.: 125 credits; B.S.: 120 credits

The undergraduate programs in fisheries offer students broad education and training, preparing graduates to work as professionals in fisheries management, research, conservation, education, policy, harvest and marketing organizations. The programs also provide a solid foundation for graduate study for students contemplating careers in advanced research and management, administration or teaching.

The B.S. degree in fisheries provides students with the knowledge base, skill sets and hands-on experience to obtain positions within state, federal and non-governmental fisheries and natural resources conservation and management agencies in Alaska and throughout North America. Graduates with this degree will be particularly qualified to work for traditional state, provincial, federal, Alaska Native, and Native American agencies in the areas of marine and freshwater fisheries biology and management and fisheries social science.

The B.A. degree in fisheries provides students with the knowledge base, skill sets, and hands-on experience to obtain positions within the fishing and seafood processing industries in Alaska and throughout North America. Graduates with this degree will be qualified to work for traditional fisheries governmental agencies in the areas of business administration, policy development, fisheries education and outreach, or as social scientists.

The minor gives students who are majoring in other areas (i.e. wildlife biology, natural resources management, business, rural and community development, journalism, etc.) a solid introductory background in fisheries.

Fisheries students have opportunities to work with professionals from federal, state, local, tribal and private groups during their required internship or research project. These organizations often hire fisheries students for summer internships, which can turn into full-time jobs after graduation.

The undergraduate fisheries program is administered through the UAF Fairbanks campus. Students have the option of completing their program in Fairbanks or Juneau, with many fisheries courses offered via distance education for students in other outlying areas. The undergraduate fisheries program is designed as a 2+2 program in which students may complete their first two years at UAF, UAS or UAA (or other local UA campus) and their last two years in either Fairbanks or Juneau as a UAF student. Students who are interested in the 2+2 option must contact the UAF fisheries program.

Fairbanks offers an excellent location for the study of Interior Alaska aquatic habitats with a number of subarctic streams and lakes within easy reach. The Juneau Center has ready access to both marine and freshwater habitats and freshwater and seawater wet labs. The Fishery Industrial Technology Center, located in Kodiak, has facilities for work in harvest technology, seafood technology, seafood biochemistry and microbiology.

Major — B.A. Degree
1. Complete the general university requirements (page 132).
2. Complete the B.A. degree requirements (page 137).
3. Complete the following:*
   ACCT F261—Accounting Concepts and Uses 1 ....................................3
   ANS F350W,O—Cross Cultural Communication: Alaskan Perspectives (3)
   ANTH F403W,O—Cultural Anthropology (3)
   ANTH F428—Ecological Anthropology and Regional Sustainability .................................................................3
   BA F307—Introductory Human Resources Management (3)
   BA F343—Principles of Marketing ..............................................3
   BA F390—Organizational Theory and Behavior (3)
   or BA F330—The Legal Environment of Business (4) ........ 3 – 4
   ECON F235—Introduction to Natural Resources ........................ 3
   ENGL F314 W,O—Technical Writing ........................................3
   FISH F101—Introduction to Fisheries .........................................3
   FISH F261—Introduction to Fisheries Utilization ........................3
   FISH F288—Fish and Fisheries of Alaska ..................................3
   FISH F411—Human Dimensions of Environmental Systems .......3
   FISH F490—Experiential Learning Internship ............................1
   NRM F407—Environmental Law (3)
   or HIST F411—Environmental History (3) .............................3
   PS F447—U.S. Environmental Polities (3)
   or PS F454—International Law and the Environment (3)
   or PS F455O—Political Economy of the Global Environment (3)
   or PS F458—Comparative Environmental Politics (3) .............3
   RD F300W—Rural Development in a Global Perspective (3)
   or RD F350O—Indigenous Knowledge and Community Research (3)
   or RD F430—Indigenous Economic Development and Entrepreneurship (3) ..................................................3
   STAT F200X—Elementary Probability and Statistics .................3
   Upper-division fisheries elective ............................................3
4. Minimum credits required ..................................................125
5. Students must earn a C grade (2.0) or better in each course.
Major — B.S. Degree
1. Complete the general university requirements. (See page 132. As part of the core curriculum requirements, complete MATH F200X or F272X.)

2. Complete the B.S. degree requirements. (See page 137. As part of the B.S. degree requirements, complete STAT F401 or STAT F402.)

3. Complete the following:*  
   BIOI F115X—Fundamentals of Biology I** ........................................... 4  
   BIOI F116X—Fundamentals of Biology II** .................................... 4  
   BIOI F271—Principles of Ecology .............................................. 4  
   BIOI F310—Animal Physiology .................................................. 4  
   BIOI F362—Principles of Genetics ............................................. 4  
   BIOI F473W—Limbology (4)  
      or MSL F411—Current Topics in Oceanographic Research (3)  
      or BIOI F476—Ecosystem Ecology (3)  
      or BIOI F483—Stream Ecology (3)  
      or FISH F440—Introductory Oceanography  
      for Fisheries (3) ...................................................................... 3 – 4  
   CHEM F103X—General Chemistry I** .................................... 4  
   CHEM F106X—General Chemistry II** .................................... 4  
   ECON F235—Introduction to Natural Resource Economics (3)  
   or ECON F201—Principles of Economics I:  
      Microeconomics (3) ............................................................. 3  
   ENGL F414W—Research Writing ................................................ 3  
   FISH F101—Introduction to Fisheries ........................................ 3  
   FISH F288—Fish and Fisheries of Alaska .................................... 3  
   FISH F301—Biography of Fishes (4)  
      or BIOI F305—Invertebrate Zoology ...................................... 4  
   FISH F315—Freshwater Fisheries Techniques (3)  
      or FISH F414—Field Methods in Marine Ecology  
      and Fisheries (3) ................................................................. 3  
   FISH F411—Human Dimensions of Environmental  
      Systems ............................................................................ 3  
   FISH F425—Fish Ecology (3)  
      or FISH F426—Behavioral Ecology of Fishes (3)  
      or FISH F428—Physiological Ecology of Fishes .................. 3  
   FISH F487W.O—Fisheries Management ................................... 3  
   FISH F490—Experiential Learning Internship  
      or PHYS F103X—College Physics**  
      or STAT F200X—Elementary Probability and Statistics ....... 3  
   STAT F401—Regression and Analysis of Variance*** (4)  
      or STAT F402—Scientific Sampling***  
   4. Complete 12 credits of electives* from Fisheries, Biology or  
      Natural Resource Management (of which at least 4 credits must be  
      upper-division).
   5. Complete 4 credits of electives* from Chemistry, Geology or Physics.  
   6. Complete 4 credits of other electives*.

7. Minimum credits required: ......................................................... 120  
   * Students must earn a C grade (2.0) or better in each course.  
   ** Courses completed in the fisheries core may be used to meet the core natural  
      sciences or B.S. degree natural science requirements but not both.  
   *** STAT F401 or STAT F402 may be used to meet the B.S. degree mathematics  
      requirements.

Note: Fisheries majors are encouraged to reinforce their fisheries qualifications by  
earning a minor in a program related to fisheries. Some examples are biology,  
business management, chemistry, economics, mathematics, natural resources  
management (animal science), northern studies, statistics or wildlife.

Minor
1. Complete the following:  
   FISH F101—Introduction to Fisheries (3)  
   or NRM F101—Natural Resources Conservation  
      and Policy (3) ........................................................................ 3  
   FISH F288—Fish and Fisheries of Alaska  
   or STAT F401—Regression and Analysis of Variance*** (4)  
   or STAT F402—Scientific Sampling***  
   2. Students must take at least 6 additional credit hours designated  
      FISH, with the exception of any FISH F492 courses.
   3. Students may apply at most 3 credit hours from one of the following  
      concentrations:

Fisheries Science  
   BIOI F305—Invertebrate Zoology .............................................. 5  
   BIOI F310—Animal Physiology .................................................. 3  
   BIOI F328—Biological Marine Organisms .................................. 3  
   BIOI F441—Animal Behavior .................................................... 3  
   BIOI F471—Population Ecology ................................................ 3  
   FISH F472W—Community Ecology ......................................... 3  
   FISH F473W—Limbology .......................................................... 4  
   FISH F476—Ecosystem Ecology ................................................. 3  
   FISH F483—Stream Ecology ..................................................... 3  
   NRM F370—Introduction to Watershed Management ............... 3

Fisheries Business Administration and Economics  
   ACCT F261—Accounting Concepts and Uses I ................................ 3  
   ACCT F262—Accounting Concepts and Uses II  
      or NRM F101—Natural Resources Conservation  
      and Policy (3) ........................................................................ 3  
   BA F151—Introduction to Business ........................................... 4  
   BA F307—Introductory Human Resources Management ........... 3  
   BA F325—Financial Management ............................................. 3  
   BA F330—The Legal Environment of Business ......................... 3  
   BA F343—Principles of Marketing ............................................. 3  
   BA F390—Organizational Theory and Management .................. 3  
   ECON F200—Principles of Economics  
      or NRM F101—Natural Resources Conservation  
      and Policy (3) ........................................................................ 3  
   ECON F235—Introduction to Natural Resources Economics .... 3  
   ECON F335—Intermediate Natural Resource Economics ........ 3  
   ECON F434—Environmental Economics  
      or NRM F101—Natural Resources Conservation  
      and Policy (3) ........................................................................ 3

Fisheries Policy and Rural Development  
   ANS F350W.O—Cross Cultural Communication:  
      Alaskan Perspectives ............................................................. 3  
   ANS F401—Cultural Knowledge of Native Elders ....................... 3  
   ANTH F242—Native Cultures of Alaska  
      or NRM F101—Natural Resources Conservation  
      and Policy (3) ........................................................................ 3  
   ANTH F403W.O—Political Anthropology  
      or NRM F101—Natural Resources Conservation  
      and Policy (3) ........................................................................ 3  
   ANTH F428—Ecological Anthropology and Regional Sustainability  
      or NRM F101—Natural Resources Conservation  
      and Policy (3) ........................................................................ 3  
   HIST F411—Environmental History ......................................... 3  
   NRM F407—Environmental Law ................................................. 3  
   NRM F430—Resource Management Planning  
      or NRM F101—Natural Resources Conservation  
      and Policy (3) ........................................................................ 3  
   PS F101—Introduction to American Government  
      and Politics ................................................................................ 3  
   PS F447—U.S. Environmental Politics ....................................... 3  
   PS F454—International Law and the Environment ..................... 3  
   PS F455O—Political Economy of the Global Environment ...... 3  
   PS F458—Comparative Environmental Politics ......................... 3  
   RD F200—Community Development in the North  
      or NRM F101—Natural Resources Conservation  
      and Policy (3) ........................................................................ 3  
   RD F245—Fisheries Development in Rural Alaska  
      or NRM F101—Natural Resources Conservation  
      and Policy (3) ........................................................................ 3  
   RD F256—Co-management of Renewable Resources ............... 3  
   RD F265—Perspectives on Subsistence in Alaska ....................... 3  
   RD F300W—Rural Development in a Global Perspective ......... 3  
   RD F350O—Indigenous Knowledge and Community  
      Research  
      or NRM F101—Natural Resources Conservation  
      and Policy (3) ........................................................................ 3  
   RD F430—Indigenous Economic Development  
      and Entrepreneurship .............................................................. 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)
- 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)
- ENGL 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)

**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 F175X ....................................................(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