

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. wild-life 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 131).
2. Complete the B.A. degree requirements (page 136).
3. Complete the following: *
 - ACCT F261—Accounting Concepts and Uses I.....3
 - ANS F350W/O—Cross Cultural Communication:
Alaskan Perspectives (3)
or ANS F401—Cultural Knowledge of Native Elders3
 - ANTH F403W/O—Political Anthropology (3)
or ANTH F428—Ecological Anthropology and Regional
Sustainability.....3
 - BA F307—Introductory Human Resources Management (3)
or BA F343—Principles of Marketing3
 - 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 Internship1
 - NRM F407—Environmental Law (3)
or HIST F411—Environmental History (3).....3
 - PS F447—U.S. Environmental Politics (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 Statistics3
 - Upper division fisheries elective.....3
4. Minimum credits required125
* 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 131. As part of the core curriculum requirements, complete MATH F200X or F272X.) Complete the B.S. degree requirements. (See page 136. As part of the B.S. degree requirements, complete STAT F401 or STAT F402.)

- Complete the following fisheries core requirements:*
 - BIOL F115X—Fundamentals of Biology I**4
 - BIOL F116X—Fundamentals of Biology II**4
 - BIOL F271—Principles of Ecology4
 - BIOL F310—Animal Physiology4
 - BIOL F362—Principles of Genetics4
 - BIOL F473W—Limnology (4)
 - or MSL F411—Current Topics in Oceanographic Research (3)
 - or BIOL F476—Ecosystem Ecology (3)
 - or BIOL F483—Stream Ecology (3)
 - or FISH F440—Introductory Oceanography for Fisheries (3)3 – 4
 - CHEM F105X—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 Writing3
 - FISH F101—Introduction to Fisheries3
 - FISH F288—Fish and Fisheries of Alaska3
 - FISH F301—Biology of Fishes (4)
 - or BIOL F305—Invertebrate Zoology4
 - FISH F315—Freshwater Fisheries Techniques (3)
 - or FISH F414—Field Methods in Marine Ecology and Fisheries (3)3
 - FISH F411—Human Dimensions of Environmental Systems3
 - FISH F425—Fish Ecology (3)
 - or FISH F426—Behavioral Ecology of Fishes (3)
 - or FISH F428—Physiological Ecology of Fishes3
 - FISH F487W,O—Fisheries Management3
 - FISH F490—Experiential Learning Internship1
 - PHYS F103X—College Physics**4
 - STAT F200X—Elementary Probability and Statistics3
 - STAT F401—Regression and Analysis of Variance*** (4)
 - or STAT F402—Scientific Sampling***3
- Complete 12 credits of electives* from Fisheries, Biology or Natural Resource Management (of which at least 4 credits must be upper division).
- Complete 4 credits of electives* from Chemistry, Geology or Physics.
- Complete 4 credits of other electives*.

6. Minimum credits required120

* 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

- 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 Alaska3

- Students must take at least 6 additional credit hours designated FISH, with the exception of any FISH F492 courses.
- Students may apply at most 3 credit hours from one of the following concentrations:

Fisheries Science

BIOL F305—Invertebrate Zoology5
BIOL F310—Animal Physiology3
BIOL F328—Biology of Marine Organisms3
BIOL F441—Animal Behavior3
BIOL F471—Population Ecology3
BIOL F472W—Community Ecology3
BIOL F473W—Limnology4
BIOL F476—Ecosystem Ecology3
BIOL F483—Stream Ecology3
NRM F370—Introduction to Watershed Management3

Fisheries Business Administration and Economics

ACCT F261—Accounting Concepts and Uses I3
ACCT F262—Accounting Concepts and Uses II3
BA F151—Introduction to Business4
BA F307—Introductory Human Resources Management3
BA F325—Financial Management3
BA F330—The Legal Environment of Business3
BA F343—Principles of Marketing3
BA F390—Organizational Theory and Management3
ECON F200—Principles of Economics3
ECON F235—Introduction to Natural Resources Economics3
ECON F335—Intermediate Natural Resource Economics3
ECON F434—Environmental Economics3

Fisheries Policy and Rural Development

ANS F350W,O—Cross Cultural Communication:
Alaskan Perspectives3
ANS F401—Cultural Knowledge of Native Elders3
ANTH F242—Native Cultures of Alaska3
ANTH F403W/O—Political Anthropology3
ANTH F428—Ecological Anthropology and Regional Sustainability3
HIST F411—Environmental History3
NRM F407—Environmental Law3
NRM F430—Resource Management Planning3
PS F101—Introduction to American Government and Politics3
PS F447—U.S. Environmental Politics3
PS F454—International Law and the Environment3
PS F455O—Political Economy of the Global Environment3
PS F458—Comparative Environmental Politics3
RD F200—Community Development in the North3
RD F245—Fisheries Development in Rural Alaska3
RD F256—Co-management of Renewable Resources3
RD F265—Perspectives on Subsistence in Alaska3
RD F300W—Rural Development in a Global Perspective3
RD F350O—Indigenous Knowledge and Community Research3
RD F430—Indigenous Economic Development and Entrepreneurship3
4. Minimum credits required15

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 completed with 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) _____
 GEOG 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



UNIVERSITY OF ALASKA FAIRBANKS

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