

FISHERIES

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

BA, BS Degree

Minimum Requirements for Degrees: BA: 125 credits;
BS: 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 BS 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 BA 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 — BA Degree

1. Complete the general university requirements (page 131).
2. Complete the BA degree requirements (page 135).

3. Complete the following:*
 - ACCT F261—Principles of Financial Accounting.....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
Sustainability3
 - BA F307—Introductory Human Resources Management (3)
or 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 Resources3
 - ENGL F314 W,O—Technical Writing.....3
 - FISH F101—Introduction to Fisheries.....3
 - FISH F261—Introduction to Fisheries Utilization3
 - FISH F288—Fish and Fisheries of Alaska.....3
 - FISH F411—Human Dimensions of Environmental Systems3
 - 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 Statistics.....3
 - Upper-division fisheries elective3
 4. Minimum credits required125
- * Students must earn a C- grade or better in each course.

Major — BS Degree

1. Complete the general university requirements. (See page 131. As part of the core curriculum requirements, complete MATH F200X or F272X.) *To graduate, all students must complete 39 upper-division credits.*
2. Complete the BS degree requirements. (See page 136. As part of the BS degree requirements, complete STAT F401 or STAT F402.)
3. Complete the following:*
 - BIOL F115X—Fundamentals of Biology I**4
 - BIOL F116X—Fundamentals of Biology II**4
 - BIOL F260—Principles of Genetics4
 - BIOL F310—Animal Physiology (4)
or BIOL F213X—Human Anatomy and Physiology I (4)
and BIOL F214X—Human Anatomy and Physiology II (4).... 4 – 8
 - BIOL F371—Principles of Ecology4
 - 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 Writing.....3
 - FISH F101—Introduction to Fisheries.....3
 - FISH F288—Fish and Fisheries of Alaska.....3
 - FISH F301—Biology of Fishes (4)
or BIOL F305—Invertebrate Zoology (4)
or FISH F427—Ichthyology (4)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)
or GEOG F312—People, Places, and Environment:
Principles of Geography (3)
or SOC F440—Environmental Sociology (3).....3
- FISH F425—Fish Ecology (3)
or FISH F426—Behavioral Ecology of Fishes (3)
or FISH F428—Physiological Ecology of Fishes (3)3
- FISH F487W,O—Fisheries Management3
- FISH F490—Experiential Learning Internship1
- PHYS F103X—College Physics** (4)
or PHYS F115X—Physical Science I** (4)
or PHYS F211X—General Physics** (4)4
- STAT F200X—Elementary Probability and Statistics.....3
- STAT F401—Regression and Analysis of Variance*** (4)
or STAT F402—Scientific Sampling*** (3) 3 – 4
4. Complete 15 credits of electives* from Fisheries, Biology, Marine
Science and Limnology or Natural Resource Management (of which at
least 5 credits must be upper-division).
5. Complete 4 credits of electives* from Chemistry, Geology or Physics.
6. Additional electives* to complete minimum credits required.
7. Minimum credits required120
- * Students must earn a C- grade or better in each course.
- ** Courses completed in the fisheries core may be used to meet the core natural
sciences or BS degree natural science requirements but not both.
- *** STAT F401 or STAT F402 may be used to meet the BS 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.....3
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

BIOL F305—Invertebrate Zoology	5
BIOL F310—Animal Physiology	3
BIOL F328—Biology of Marine Organisms	3
BIOL F441—Animal Behavior.....	3
BIOL F471—Population Ecology.....	3
BIOL F472W—Community Ecology.....	3
BIOL F473W—Limnology.....	3
BIOL F476—Ecosystem Ecology	3
BIOL F483—Stream Ecology.....	3
NRM F370—Introduction to Watershed Management.....	3

Fisheries Business Administration and Economics

ACCT F261—Principles of Financial Accounting.....	3
ACCT F262—Principles of Managerial Accounting.....	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 F235—Introduction to Natural Resources Economics	3
ECON F335—Intermediate Natural Resource Economics	3
ECON F434—Environmental Economics.....	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	3
ANTH F403W/O—Political Anthropology	3
ANTH F428—Ecological Anthropology and Regional Sustainability	3
HIST F411—Environmental History.....	3
NRM F407—Environmental Law	3
NRM F430—Resource Management Planning.....	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	3
RD F245—Fisheries Development in Rural Alaska	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.....	3
RD F430—Indigenous Economic Development and Entrepreneurship	3

4. Minimum credits required15

Baccalaureate Core Requirements

Communication 9 Credits

- ENGL F111X—Introduction to Academic Writing.....(3)
ENGL F190H may be substituted.

Complete one of the following:

- ENGL F211X—Academic Writing about Literature.....(3)
- ENGL F213X—Academic Writing about the Social and Natural Sciences.....(3)

Complete one of the following:

- COMM F131X—Fundamentals of Oral Communication: Group Context.....(3)
- COMM F141X—Fundamentals of Oral Communication: Public Context.....(3)

9

Perspectives on the Human Condition 18 Credits

Complete all of the following four courses:

- ANTH F100X/SOC F100X—Individual, Society and Culture.....(3)
- ECON F100X or PS F100X—Political Economy.....(3)
- HIST F100X—Modern World History.....(3)
- ENGL/FL F200X—World Literature.....(3)

12

Complete one of the following three courses:

- ART/MUS/THR F200X—Aesthetic Appreciation: Interrelationship of Art, Drama and Music.....(3)
- HUM F201X—Unity in the Arts.....(3)
- ANS F202X—Aesthetic Appreciation of Alaskan Native Performance.....(3)

3

Complete one of the following six courses:

- BA F323X—Business Ethics.....(3)
- COMM F300X—Communicating Ethics.....(3)
- JUST F300X—Ethics and Justice.....(3)
- NRM F303X—Environmental Ethics and Actions.....(3)
- PS F300X—Ethics and Society.....(3)
- PHIL F322X—Ethics.....(3)

3

Or complete 12 credits from the above courses plus one of the following:

- Two semester-length courses in a single Alaska Native language or other non-English language
- Three semester-length courses (9 credits) in American Sign Language taken at the university level.

6 – 9

Mathematics 3 Credits

Complete one of the following:

- MATH F103X—Concepts and Contemporary Applications of Mathematics.....(3)
- MATH F107X—Functions for Calculus*.....(4)
- MATH F161X—Algebra for Business and Economics**.....(3)
- STAT F200X—Elementary Probability and Statistics.....(3)

* No credit may be earned for more than one of MATH F107X or F161X.

Or complete one of the following:*

- MATH F200X—Calculus I**.....(4)
- MATH F201X—Calculus II.....(4)
- MATH F202X—Calculus III.....(4)
- MATH F262X—Calculus for Business and Economics.....(4)
- MATH F272X—Calculus for Life Sciences.....(4)

* Or any math course having one of these as a prerequisite

** No credit may be earned for more than one of Math F200X, F262X or F272.

3 – 4

Natural Sciences 8 Credits

Complete any two (4-credit) courses.

- ATM F101X—Weather and Climate of Alaska.....(4)
- BIOL F100X—Human Biology.....(4)
- BIOL F101X—Biology of Sex.....(4)
- BIOL F103X—Biology and Society.....(4)
- BIOL F104X—Natural History.....(4)
- BIOL F115X—Fundamentals of Biology I.....(4)
- BIOL F116X—Fundamentals of Biology II.....(4)
- BIOL F120X—Introduction to Human Nutrition.....(4)
- BIOL F213X—Human Anatomy and Physiology I.....(4)
- BIOL F214X—Human Anatomy and Physiology II.....(4)
- CHEM F100X—Chemistry in Complex Systems.....(4)
- CHEM F103X—Basic General Chemistry.....(4)
- CHEM F104X—Beginnings in Biochemistry.....(4)
- CHEM F105X—General Chemistry.....(4)
- CHEM F106X—General Chemistry.....(4)
- GEOG F111X—Earth and Environment: Elements of Physical Geography.....(4)
- GEOS F100X—Introduction to Earth Science.....(4)
- GEOS F101X—The Dynamic Earth.....(4)
- GEOS F106X—Life and the Age of Dinosaurs.....(4)
- GEOS F112X—History of Earth and Life.....(4)
- GEOS F120X—Glaciers, Earthquakes and Volcanoes.....(4)
- GEOS F125X—Humans, Earth and Environment.....(4)
- MSL F111X—The Oceans.....(4)
- PHYS F102X—Energy and Society.....(4)
- PHYS F103X—College Physics.....(4)
- PHYS F104X—College Physics.....(4)
- PHYS F115X—Physical Science I.....(4)
- PHYS F175X—Astronomy.....(4)
- PHYS F211X—General Physics.....(4)
- PHYS F212X—General Physics.....(4)
- PHYS F213X—Elementary Modern Physics.....(4)

8

Library and Information Research 0 – 1 Credit

- Successful completion of library skills competency test or LS F100X or LS F101X prior to junior standing

0 – 1

Upper-Division Writing and Oral Communication

Complete the following at the upper-division level:

- Two writing intensive courses designated (W) and one oral communication intensive course designated (O), or two oral communication intensive courses designated (O/2) (see degree and/or major requirements)

Total credits required 38 – 39

All degrees (e.g. B.A., B.S., etc.) require additional courses.

Refer to specific degree and program requirements.

Students must earn a C- grade or better in each course used toward the baccalaureate core.