FISHERIES TECHNOLOGY (FT)

FT S120 Fisheries of Alaska
3 credits (3+0)
Explores the biology, fishing techniques, management, and research of fisheries across Alaska. Each module focuses on a different fishery from a different region of the state. Guest lecturers share their fishery experience, research findings, and address current issues in the fisheries they are involved in. Recommended for students who are curious about the diversity of fisheries across Alaska.

FT S122 Alaska Salmon Culture I
3 credits (3+0)
The first course of a two semester sequence which introduces students to the principles, concepts and methods used in the production of Pacific Salmon with an emphasis on modern fish culture techniques used by Alaskan producers. Addresses all aspects of fry and smolt production. Topics include water quality, brood stock management, egg collection and incubation, egg and live fish transport, fresh and saltwater rearing techniques, feeding practices, growth, record keeping and fish health management.

FT S123 Introduction to Mariculture
3 credits (3+0)
Students are introduced to the principles, concepts and methods used in the production of seaweed, shellfish and other mariculture products with an emphasis on the techniques used by Alaskan producers. The course will cover all aspects of production, including species identification and biology, site selection, permitting, daily nursery and farm operations, business management, processing and sales.

FT S125 Fish Pathology Lab
1 credit (.5+1)
In a hands-on laboratory setting, students study fish anatomy, physiology, and learn about common diseases found in fish throughout Alaska. Emphasizes lab techniques like data collection, sampling methods and equipment management. Pass/Fail grading.

FT S150 Cold Water Survival
1 credit (.5 +1)
Introduces students to fundamental safety procedures related to working in cold water environments. Reviews basic firefighting, emergency signaling, and boat handling basics. Students gain survival skills using immersion suits, PFDs, emergency radios, and EPIRBs. Pass/Fail grading.

FT S188 Basic Scuba Diving
3 credits (2+2)
In classroom, pool, and ocean settings, instructors teach the basic skills of Open Water and Dry Suit SCUBA diving. Covers the physics and physiology of diving, in addition to best practices. Students who complete the course earn a Professional Association of Dive Instructors (PADI), Scuba Educators, National Association of Underwater Instructors (NAUI), or similar certification as an Open Water Diver with a specialty in Dry Suit Diving. Certification requires that students complete a 200-yard swim and a 10-minute survival float.

FT S189 Advanced Scuba Diving
1 credit (.5+1)
Students complete five distinct adventure dives beyond their Basic SCUBA certification to become an Advanced SCUBA Diver. Dry suit diving, deep diving to 60 feet, and navigation diving are required for certification, and students may choose the remaining two adventure dives from a diverse offering. Other skills include boat diving, naturalistic diving, or night diving. Students who complete the course earn a Professional Association of Dive Instructors (PADI) Scuba Educators, National Association of Underwater Instructors (NAUI), or similar certification as an advanced diver. Pass/Fail grading.).
Prerequisite: Open Water certification from a nationally recognized SCUBA education organization (PADI, NAUI, etc.

FT S194 Fisheries Policy Practicum
1 credit (0+0+4)
Leads students through the structure, organization, and processes surrounding fisheries policy. Students study aspects of fisheries policy through management meetings, and learn how policy and procedures are created by various entities throughout the course. Depending upon availability, students will attend one of the following management meetings: North Pacific Fisheries Management Council (NPFMC), International Pacific Halibut Commission (IPHC), State of Alaska Board of Fisheries (BOF), or the Federal Subsistence Board.

FT S211 Fisheries Management Techniques
3 credits (3+0)
Presents common sampling and monitoring techniques used by technicians in Alaskan fisheries. Introduces students to nets, stream survey techniques, intertidal assessment, fish counts, habitat assessment, data collection, recording, presentation, and field safety and survival techniques.
Prerequisite: FT S274 or concurrent enrollment, or former FT S273.

FT S212 Fisheries Management Techniques Lab
1 credit (.5+1)
Offers hands-on experience in the sampling and monitoring techniques used in Alaska fisheries. Students set minnow traps, seine beaches, sample plankton, assess habitats, and collect data in the field. Pass/Fail grading.
Prerequisite: FT S211 or concurrent enrollment, or instructor approval.

FT S222 Alaska Salmon Culture II
3 credits (3+0)
Details the methods used to enhance and rehabilitate the five species of Pacific salmon harvested in the commercial, sport, and subsistence fisheries in Alaska and the Pacific Northwest. Covers the enhancement policies established by the State of Alaska, and the enhancement of salmon through aquaculture associations. Follows FT S122 as the second course in a two-semester sequence that covers the principles of Pacific Salmon production with an emphasis on modern fish culture techniques used in Alaska.
Prerequisite: FT S122.

FT S223 Alaskan Aquaculture Lab
1 credit (0+2)
This intensive course focuses on Alaskan aquaculture techniques and skills appropriate to new students as well as those with aquaculture experience. Topics include species biology, egg incubation techniques, feeding techniques, rearing, pathobiology, and tagging and marking techniques. Course includes in-class lecture, labs, and visits to local hatchery and aquaculture facilities.Pass/Fail grading.

FT S270 Freshwater Ecology
3 credits (3+0)
The principles, concepts and techniques used as part of fresh water ecological fisheries research, management and enhancement are presented in a technical application format. Topics include physical and biological characteristics of freshwater systems, and data collection, management and interpretation.
Prerequisite: MATH S105 or MATH S151 and WRTG S111, and FT S120.

FT S272 Fisheries Management, Law and Economics
3 credits (3+0)
Introduces state, federal, and international laws that affect fisheries, and explores the economic principles of fisheries. Focuses on the biological, economic, social, and political implications of fisheries management, and uses examples from the Pacific Northwest to highlight management techniques.
Prerequisite: FT S120.

FT S274 Fish Biology
3 credits (3+0)
Introduces the major groups of marine fishes, emphasizing those found in Alaskan waters fisheries and the North Pacific Ocean. Students learn identification, classification, anatomy, physiology, behavior, reproduction, age, and growth of both finfish and shellfish. Additional emphasis will be placed on commercially important fish species of Alaska.
Prerequisite: FT S120 or concurrent enrollment, or instructor approval.

FT S288 Scientific Diving
3 credits (1+4)
This course will introduce students to SCUBA diving techniques commonly used in the research community. The course will also familiarize students with local Alaska subtidal flora and fauna and give students an opportunity to work underwater. Completion of this course will allow students to be eligible to join (or remain active in) the UA dive program. Students must show proof of completing an Open Water certification course and complete a UA Dive physical prior to beginning the course.

FT S291 Fisheries Internship
1-6 credits (0+0+4-24)
Work in an approved fisheries agency or natural resource based industry with a fisheries emphasis. The student is to be supervised by a senior employee of the agency in cooperation with the faculty advisor.