Reference 5

Fisheries Technology

UNIVERSITY of ALASKA SOUTHEAST

Prepare for a Career in Fisheries Study in Your Own Community

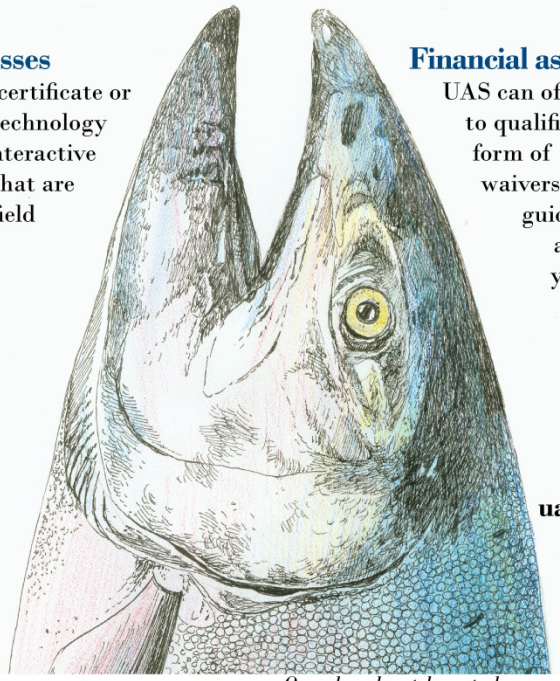
Classes for certificate or A.A.S. degrees offered on the web in cooperation with campuses from Ketchikan to Bristol Bay.

E-Learning classes

You can earn your certificate or degree in fisheries technology from home. Take interactive web-based classes that are complemented by field experience.

Financial assistance available

UAS can offer financial support to qualified individuals in the form of scholarships, tuition waivers, etc. We offer career guidance and job search assistance to support you after graduation.



Oncorhynchus tshawytscha

UAS
UNIVERSITY OF ALASKA
SOUTHEAST
learn · engage · change

uas.alaska.edu/sitka
907-747-7700
800-478-6653

UAS is an AA/EO employer and educational institution

Two certificate tracks: fish culture and fisheries management

CERTIFICATE REQUIREMENTS (2008-2009 CATALOG)

FISH CULTURE EMPHASIS			
Minimum Credit Hours			**32**
General Requirements			**11**
Written and Oral Communication Skills			
Select one from the following (3 credits)			
ENGL	S111	Methods of Written Communication	3
ENGL	S212	Technical Report Writing	3
COMM	S111	Fundamentals of Oral Communication*	3
COMM	S235	Small Group Communication and Team Building*	3
**Grade C or better*			
Computational Skills			
Select one from the following (4 credits)			
MATH	S105	Intermediate Algebra	4
MATH	S107	College Albebra	4
STAT	S107	Introductory Statistics	4
Science Skills			
Select one from the following (4 credits)			
BIOL	S103	Biology and Society	4
BIOL	S104	Natural History of Alaska	4
BIOL	S105	Fundamentals of Biology I	4
BIOL	S106	Fundamentals of Biology II	4
CHEM	S103	Introduction to General Chemistry	4
ENVS	S101	Introduction to Environmental Science	4
Program Requirements			**21**
FT	S120	Fisheries of Southeast Alaska	3
FT	S122	Fin fish Culture I	3
FT	S222	Fin fish Culture II	3
FT	S273	Fundamentals of Fisheries Biology	4
FT	S291	Fisheries Technology Internship	3
Select one from the following (1 credits)			
CIOS	S135	Using Spreadsheets in the Workplace	1
CIOS	S140	Using Databases in the Workplace	1
Select one from the following (3 credits)			
FT	S270	Introduction to Limnology	3
OCN	S101	Introduction to Oceanography	3

FISHERIES MANAGEMENT EMPHASIS			
Minimum Credit Hours			**32**
General Requirements			**11**
Written and Oral Communication Skills			
Select one from the following (3 credits)			
ENGL	S111	Methods of Written Communication	3
ENGL	S212	Technical Report Writing	3
COMM	S111	Fundamentals of Oral Communication*	3
COMM	S235	Small Group Communication and Team Building*	3
**Grade C or better*			
Computational Skills			
Select one from the following (4 credits)			
MATH	S105	Intermediate Albebra	4
MATH	S107	College Albegra	4
STAT	S107	Survey of Statistics	4
Science Skills			
Select one from the following (4 credits)			
BIOL	S103	Biology and Society	4
BIOL	S104	Natural History of Alaska	4
BIOL	S105	Fundamentals of Biology I	4
BIOL	S106	Fundamentals of Biology II	4
Program Requirements			**21**
CIOS	S135	Using Spreadsheets in the Workplace	1
FT	S120	Fisheries of Southeast Alaska	3
FT	S210	Field Methods/Safety in Fisheries Technology	4
FT	S272	Fisheries Management, Law, Economics	3
FT	S273	Fundamentals of Fisheries Biology	4
FT	S291	Fisheries Technology Internship	3
Select one from the following (3 credits)			
FT	S270	Introduction to Limnology	3
OCN	S101	Introduction to Oceanography	3

Fisheries Technology, A.A.S.

Associate of Applied Science

Ketchikan, Distance Delivery

The Associate of Applied Science provides students with a broad educational and practical foundation in the field of fisheries technology. Students will be prepared for entry level employment in federal and state agencies, hatcheries, and the private sector.

Degree Requirements

The A.A.S. in Fisheries Technology requires a minimum of sixty credit hours and a GPA of 2.5. Of the 60 credits, students must complete 20 credits at the 200 level or above. Students must earn 6 credit hours of internship.

MINIMUM CREDIT HOURS	60

- Articulates with the certificate program
- Also articulates with UAF School of Fisheries. Graduates can readily move on to B.Sc.
- Two tracts: fish culture and fisheries management

Internships are a fundamental aspect of the program

GENERAL EDUCATION REQUIREMENTS (PG. 60)			17
Written Communication Skills			
ENGL	S111	Methods of Written Communication	3
ENGL	S212	Technical Report Writing	3
Oral Communication Skills			
Select one from the following (3 credits):			
COMM	S111	Fundamentals of Oral Communication*	3
COMM	S235	Small Group Communication and Team Building*	3
**Grade C 2.00 or better*			
Computational Skills			
Select one from the following (4 credits):			
MATH	S105	Intermediate Algebra	4
MATH	S107	College Algebra	4
Science			
Select one from the following (4 credits):			
ENVS	S102	Earth and Environment	4
BIOL	S103	Biology and Society	4
BIOL	S104	Natural History of Alaska	4
CHEM	S103	Introduction to General Chemistry	4
Students interested in pursuing a bachelor's degree should take MATH S107. BIOL S105 and BIOL S106 is an allowable substitution for BIOL S103 and BIOL S104.			
MAJOR REQUIREMENTS			**43**
CIOS	S132A	Word Processing Concepts and Applications, Part A	1
CIOS	S135	Using Spreadsheets in the Workplace	1
CIOS	S140	Using Databases in the Workplace	1
FT	S120	Fisheries of Southeast Alaska	3
FT	S122	Fin Fish Culture I	3
FT	S210	Field Methods and Safety in Fisheries Technology	4
FT	S222	Fin Fish Culture II	3
FT	S270	Introduction to Limnology	3
FT	S272	Fisheries Management, Law, Economics	3
FT	S273	Fundamentals of Fisheries Biology	4
FT	S291	Fisheries Technology Internship	6
OCN	S101	Introduction to Oceanography	3
Select 8 credits from the following:			
BA	S166	Small Business Management	3
CIOS	S235	Spreadsheet Concepts and Applications	3
CIOS	S240	Database Concepts and Applications	3
MT	S119	Skiff Operator	1
MT	S120	Outboard Motor Maintenance	1
PE	S103	Scuba Diving	1
STAT	S107	Survey of Statistics	4
___	S___	Advisor-approved electives	0-4
___	S___	Any of the science GERs not taken above	4

Distance Delivery

- Use of *Elluminate* which enables live interaction between students and instructor
- Rural students have accessed courses with little difficulty in recent years
- Communication between instructor and student via email and phone – instructors highly accessible
- Disadvantages:
  - Lack of face-to-face interaction can suppress comments
  - Dependence on technology
  - Hands-on lab sessions not always possible
- Advantages:
  - Higher education available to remote sites
  - Flexibility – just need access to the internet/can be travelling
  - Class sessions are recorded to allow students access if they miss a class

Where we've come from….

- Program began 10 years ago. Carol Denton, one of the originators; Kate Sullivan, first (and current) program director.
- Began (and remains) with much input from industry. Fisheries Technology Advisory Committee was instrumental in forming type and content of instruction.

Where we are today……..

- 1 graduate runs a successful oyster farm
- 1 student recently took a position with ADFG subsistence
- 1 student in Fairbanks area interested in fisheries education/subsistence
- 1 graduate working with ADFG/Juneau and has worked at several PNP's
- 2 with USFS fisheries management
- 1 with ODFW fisheries, Astoria, OR
- 1 AMB with ADFG/Cordova
- 10 currently employed with PNP's in varying capacities
- 3 students were placed just this past year after finding about positions through the FT program
- ADFG/USFS and other staff have taken specific courses to further their careers and/or to better understand the industries they serve
- 35 students currently enrolled

Fish Culture Techniques Workshop 2012

- Designed for both experienced and inexperienced fish culturists. Learn from one another.
- Use of local resources: fish processors, 3 hatcheries, ADFG offices, etc.

Where we are heading……..

- Program moving to Sitka Campus, July 2013
- In 2011-12, agreements are in place with:
  - Bristol Bay Campus
  - Prince William Sound Community College
  - Kachemak Bay Campus
  - Working with Kodiak College
  - Will allow the program to expand substantially – more “visible” and working with local industry to provide hands-on

PWSCC
PRINCE WILLIAM SOUND COMMUNITY COLLEGE
There is NO OUT-OF-STATE TUITION at PWSCC!
Inspiration, Growth, & Learning... Naturally.

Stimulating interest at various grade levels

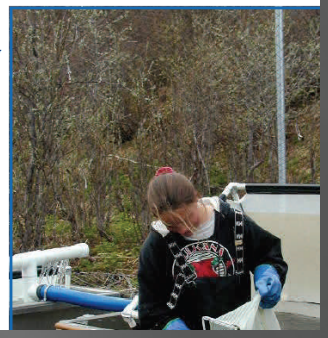
- Introduction to Fisheries Careers
- College career fairs
- Tech Prep at Thunder Mt. HS/Juneau, Craig HS, Petersburg HS
- Supporting elementary and secondary educators

FT093: Intro to Alaska Fisheries & Fisheries Career Pathways

This course is for high school juniors and seniors in communities throughout Alaska to broaden their understanding of the wide variety of fisheries careers available in our state. Students will work with a community mentor who is knowledgeable about local resources and who will facilitate 3-5 site visits with various fisheries professionals in their place of work.

Possible site visits include:

- fish hatcheries
- fisheries management agencies
- fish processing facilities
- commercial fishing vessels



2012 Salmon Spawning Olympics!

Teaching fish culture basics w/o any fish!

Someone is always telling you what to do and waving their arms

broodstock

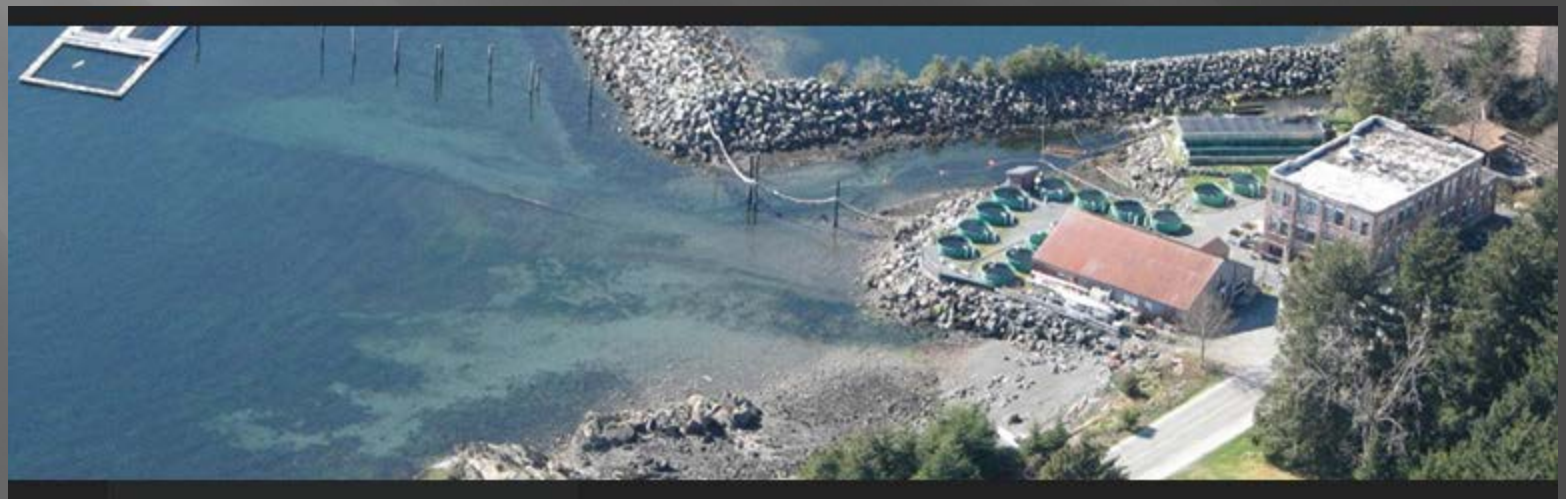
Putting waders on….why? Don't ask questions, just do it.

incubation

Spawning process

How Industry can help us

- Industry input is essential to stay on track and meet training needs
- More hands-on coursework?
  - Water recirculation/reuse
  - Fish health/nutrition
  - Basic hatchery maintenance
  - Weir/fieldwork training
  - Asynchronous delivery?
- Working to develop SJ Hatchery to better represent industry standards



Thanks to our supporters!

- Icicle Seafoods generously supports the Fisheries Technology Program. Funds are used to purchase equipment, provide tuition assistance and help us promote the program.
- Sitka Sound Science Center is a working partner. The SSSC facility is a great teaching platform. The organization also provides other forms of support.
- Many PNP's have helped the program by providing letters of support.
- DIPAC – by providing support to SSSC.
- PNP's, ADFG, USFS, NOAA and other agencies have supported us by providing current/relative information to students.
- Our students who enter the industry are well-prepared!