

Humboldt State University Department of Fisheries Biology

Five reasons to consider HSU for your Fisheries Biology education:

- # 1. Outstanding Faculty.
- # 2. Spectacular Natural Setting.
- # 3. Modern, Unique Facilities.
- # 4. Hands-On, Field-Oriented Program.
- # 5. Good Job Prospects.



DEPARTMENT of FISHERIES BIOLOGY MISSION



To provide our majors with the knowledge, skills and motivation required to ensure the conservation of fish and aquatic resources that are faced with increasing societal demands and increasing loss or degradation of habitat.

Outstanding Instructional Faculty

Award-Winning Teachers:

Dr. Roelofs (emeritus) -
AFS Educator of the
Year, US/CAN;

Dr. Fritzsche (emeritus)
- HSU Outstanding
Professor of the Year;

Dr. Mulligan (current) -
HSU Outstanding
Professor of the Year;

Award-Winning Scholars: Dr. Hankin (current) -HSU Scholar of the Year



Professor Gary Hendrickson (1978)

Courses:

- # FISH 370 Aquaculture
- # FISH 471 Fish Disease Management
- # FISH 571 Advanced Fish Disease Management
- # Current Research Interests
- # Pathology of juvenile salmon in Klamath River



Professor David Hankin (1979)

Courses:

- # FISH 450 Introduction to Fish Population Dynamics
- # BIOM 406/506 Sampling Theory

Research Interests:

- # Fishery and hatchery management practices for Chinook salmon
- # Life history and fishery dynamics of California's Dungeness crabs
- # Survey designs in small streams



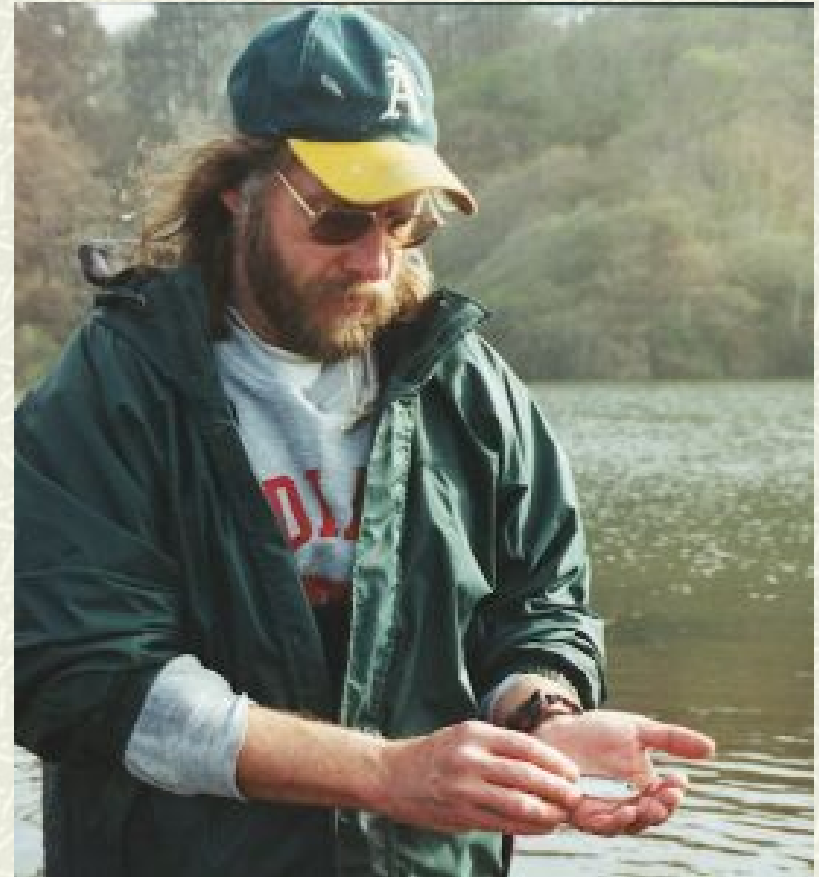
Professor Tim Mulligan (1987)

Courses:

- FISH 435 Ecology of Marine Fishes
- FISH 335 US & World Fisheries
- FISH 375 Mariculture
- FISH 540 Early Life History of Fishes

Research Interests:

- Fish-Habitat interactions in eelgrass meadows
- Ecology and early life history of estuarine and marine fishes;
- Ecology of salmonids in upper Klamath Lake.



Professor Kristine Brenneman (1994)

Courses:

- # FISH 320/320L Limnology, Lecture and Lab
- # FISH 443 Problems in Water Pollution Biology

Research Interests:

- # Wastewater Treatment and Management
- # Water Quality of Lakes and Urban Streams



Assistant Professor Andrew Kinzinger (2003)

Courses:

- # FISH 310 Ichthyology
- # FISH 314 Fishery Science Communication
- # FISH 474 Genetic Applications in Fisheries

Research Interests:

- # Molecular systematics, biogeography
- # Classification and conservation biology of cottoids (sculpins)
- # Genetic issues in salmon hatchery management



Adjunct Professor Eric Loudenslager (Hatchery Manager)

Course Assistance:

- # Fish 380 - Fishery Techniques
- # FISH 370L - Aquaculture Lab
- # FISH 311 - Fish Physiology

Research Interests:

- # Genetic variation and hybridization in north coast salmonids (steelhead, cutthroat, chinook)
- # Hatchery management
- # Genetic variation in sculpins



Adjunct Professor Eric Bjorkstedt, National Marine Fisheries Service

Courses:

- # FISH 480 - Fisheries Oceanography

Research Interests:

- # Oceanographic factors influencing dispersal, survival and recruitment of rockfish
- # Marine Reserves



Dr. Walt Duffy, Leader, CA Cooperative Fishery Research Unit

Courses:

- # FISH 575 -
Bioenergetics
- # FISH 580 -
Restoration Ecology of
Riverine Fishes

Research Interests:

- # Ecology of anadromous
salmonids
- # Watershed and
ecosystem processes.



Dr. Peggy Wilzbach, Assistant Leader, CA Coop Fisheries Unit

Courses:

- # FISH 585 -
Ecology of Running
Waters

Research Interests:

- # Factors affecting
habitat capacity
and the response
of fish to human
disturbance



Modern, Up-to-Date and Unique Facilities

- # Wildlife & Fisheries Building; Boat Storage Facility
- # Fish Hatchery on campus
- # Oceanographic Research Vessel "Coral Sea"
- # Telonicher Marine Laboratory



Wildlife & Fisheries Building

remodeled and expanded in 1999

- Modern Labs - for Age & Growth, Taxonomy, Genetics, Pathology, Water Quality
- Fish Collection
- CA Cooperative Fishery Research Unit



Boat Storage Facility

- # The facility currently houses more than fifteen boats including aluminum skiffs, zodiacs, fiberglass runabouts, a pontoon boat, larger aluminum offshore vessels, and our electro-shocking boat.



On-Campus Fish Hatchery

- Major Role in Instruction:

FISH 370 - Aquaculture

FISH 311 - Physiology

FISH 380 - Techniques

BIOM 406 - Sampling

- Major Role in Research



Telonicher Marine Laboratory

- # Lecture Rooms
- # Faculty Offices
- # Wet Lab
- # Teaching Labs for Fisheries Biology, Oceanography, and Biology



90' Vessel: R/V Coral Sea

- # A Floating Classroom!
- # Sleeping quarters - 12 bunks
- # Galley
- # Large Back Deck - set up for trawling
- # Laboratories
- # Used in Fisheries Biology Classes (FISH 335, 435, 380) & faculty research



Great Opportunities for hands-on, field-based experiences during "labs"



Opportunities for Volunteering

- # Fish Hatchery
- # Marine Lab
- # Graduate Student Research
- # Faculty Research
- # Local Fish Action Council



Advisors and Advising

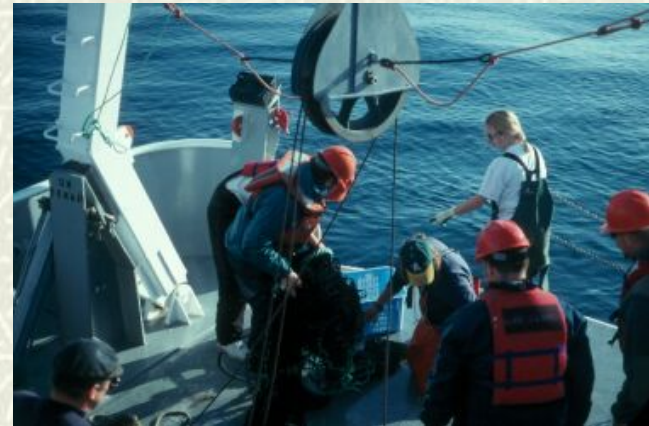
- # An advisor will be assigned when you enter the Fisheries Biology Program.
- # We try to match advisers with student options and interests.
- # Together with advisor, you will develop a custom-tailored program and sign a "contract" that becomes your official course of study.



Undergraduate Options

The Fisheries Biology Department offers two Undergraduate options:

- # Freshwater Fisheries
- # Marine Fisheries



Basic Undergraduate Program

- **Common Lower Division Requirements** - Biology, Zoology, Calculus, Statistics, Geology
- **Common Upper Division Requirements** - Ichthyology, Physiology, Genetics, Fishery Techniques, Fish Management
- **Option Requirements** - vary by option
- **Approved Electives**



Four Year Program Examples

YES - You **CAN**
get an HSU
Fisheries
Biology Degree
in four years!!!!



EXAMPLE COURSE SEQUENCES

Lower Division: FW and Marine Options

<u>YEAR 1 - FALL</u>	<u>YEAR 1 - SPRING</u>	<u>YEAR 2 - FALL</u>	<u>YEAR 2 - SPRING</u>
CHEM 107	ZOOL 110	MATH 105	BIOM 109
MATH 115	CHEM 328	FISH 310	BIOL 105
FISH 110	GE	GE	GE
GE	GE	GE	GE
GE	GE	GE	GE

Upper Division & Option Requirements

FRESHWATER OPTION

<u>YEAR 3 - FALL</u>	<u>YEAR 3 - SPRING</u>	<u>YEAR 4 - FALL</u>	<u>YEAR 4 - SPRING</u>
GEOL 109	FISH 430/430L	Quantitative Course	FISH 460
FISH 320/320L	FISH 474	FISH 311	FISH 443
FISH 380	ZOOL 316	FISH 585	FISH 495
FISH 314	Approved Elective	Approved Elective	Approved Elective
Upper Div GE	Upper Div GE	Upper Div GE	Upper Div GE

NOTE: Nine Approved Elective Units must be selected in consultation with your advisor.

Upper Division & Option Requirements

MARINE OPTION

<u>YEAR 3 - FALL</u>	<u>YEAR 3 - SPRING</u>	<u>YEAR 4 - FALL</u>	<u>YEAR 4 - SPRING</u>
GEOL 109	FISH 375	Quantitative Course	FISH 460
FISH 335	FISH 474	FISH 311	FISH 495
FISH 380	ZOOL 314	FISH 435	Approved Elective
FISH 314	OCN 109	Approved Elective	Approved Elective
Upper Div GE	Upper Div GE	Upper Div GE	Upper Div GE

NOTE: Nine Approved Elective Units must be selected in consultation with your advisor.