

Marine Sciences

TOTAL IMMERSION



HUMBOLDT STATE UNIVERSITY





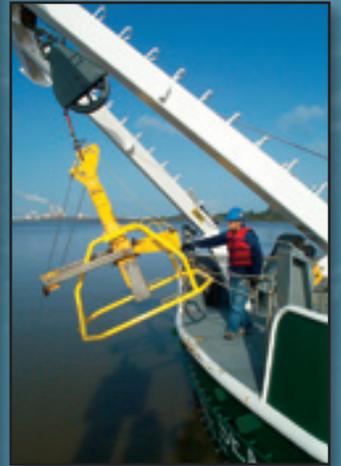
Marine Sciences at Humboldt State University

Students at Humboldt State University interested in Marine Sciences will have the benefit of several different and specialized academic programs.

HSU has an average class size of 24 students and there are on average 18 students per faculty member, a faculty-to-student ratio of 1:18. Students get close interaction with the faculty in all their programs. HSU has 49 different undergraduate degree programs, with 20 degree programs in the College of Natural Resources & Sciences. Students in the Biological Sciences can take courses in the Fisheries Biology Department and the students in Oceanography can take courses in the Geology Department.

This unique combination: small class size and the diverse expertise of over 27 marine science faculty from 7 different departments makes an undergraduate degree program at HSU rigorous, academically challenging and rewarding. Combine that with our pristine natural environment and HSU has all the important ingredients for student success.

HSU has a long-standing successful history of supporting excellence in the sciences and in the Marine Sciences in particular. The University has made the commitment to provide for state-of-the-art classrooms and laboratories, its own Marine Lab and its own Research Vessel, the Coral Sea. The faculty are committed to fostering the independence of their students, challenging them in their independent research, and supporting them to accomplish their personal goals.



R.V. Coral Sea

- ▶ R.V. Coral Sea is a certified Research Vessel by the US Coast Guard. The Captain, Mr. Scott Martin, has a US Coast Guard 1,600 ton Master's license.
- ▶ It carries a crew of four, with bunks for 10 scientists; it can carry up to 28 students on day trips. It has a range of 1,800 miles and can cruise at 10 knots.
- ▶ It has an A frame for the deployment of nets and underwater sampling gear and both a main winch and a hydrowire winch to control the depth of the nets and sampling gear.
- ▶ The R.V. Coral Sea took 28 cruises in 2006, which supported 10 courses. Altogether 498 students used the R.V. Coral Sea on these cruises.

For more information:

www.humboldt.edu/~hsuship
Phone: 707.826.3671

Are you interested in migrating whales, birds, krill, fishes, changing ocean currents and migrating sediments? The R.V. Coral Sea is our mobile platform to study the biology, chemistry and geology of the coastal Pacific Ocean. Built in 1974 and refit in 2006 with two new 500 hp engines, the R.V. Coral Sea is used by all departments with marine science programs to support undergraduate instruction and student and faculty research.

From your first year at HSU until your senior cruise, you will have direct access to the coastal ocean on the R.V. Coral Sea. A large part of all the academic programs in Marine Sciences involve the collection and observation of living marine plants and animals in their natural environment. HSU operates and maintains its own research vessel expressly dedicated to the instructional mission of our academic programs.

On the R.V. Coral Sea students learn by doing in real world conditions using modern equipment. The experience you obtain in your sea time at HSU will train you for a marine science career that may carry you to any one of the seven seas.





▶ The lab is located in Trinidad, California, 14 miles north of the HSU campus. The lab is on 1.3 acres, on a bluff overlooking the Pacific Ocean.

▶ HSU faculty taught 9 different courses at the Marine Lab in 2006; 179 students participated in these classes.

▶ HSU students completed 26 independent research projects at the Marine Lab in 2006.

For more information:

www.humboldt.edu/~marinelb

Phone: 707.826.3671

HSU Marine Lab

The primary mission of the HSU Marine Lab is to support undergraduate instruction and research. The lab, located 14 miles north of the HSU main campus, overlooks the Pacific Ocean from a 100 foot bluff. In a 5-minute walk from the lab, down the hill, we can study the Trinidad Bay habitats of sandy beaches, rocky tidepools, and subtidal kelp beds. The adjacent Trinidad Kelp Beds was designated by the State of California as an Area of Special Biological Significance in 1979 in recognition of the pristine nature of this bay. The Redwood National Park, Trinidad State Park, Smith River, Klamath River, and Mad River estuaries are a short drive from the lab.

The core of the Marine Lab is the seawater system that allows us to maintain a wide variety of local marine life available for classroom study and in-depth research. We have a 150,000 gallon state-of-art seawater system that provides virtually limitless high quality seawater for the teaching labs, research labs, and public display aquaria.

Several resident faculty have their research labs located at HSU Marine Lab and are available for help and guidance with your own research projects. There is ample space in the research wet lab to maintain and monitor marine life projects. Each year the faculty mentor undergraduate research projects on a diverse array of marine topics. The HSU Marine Lab serves as our permanent window on the sea.



Your Career

Oceanography

Employers include:

FEDERAL AND STATE AGENCIES ◀

UNIVERSITIES AND OTHER RESEARCH INSTITUTIONS ◀

OCEAN RESEARCH COMPANIES ◀

ENVIRONMENTAL CONSULTANTS ◀

PUBLIC HEALTH DEPARTMENTS ◀

Careers include:

MARINE BIOLOGIST ◀

OCEANOGRAPHER ◀

OCEAN TECHNICIAN ◀

TSUNAMI MODELER ◀

WATER QUALITY CHEMIST ◀

COASTAL HYDROLOGIST ◀

SEISMIC ENGINEER ◀

For more information:

www.humboldt.edu/~ocn

Phone: 707.826.3540

Oceanography is the study of the ocean environment and its inhabitants. It is an environmental science, an ecosystem science, and an earth science. Some oceanographers focus on trying to unravel the mysteries of the deep; others try to study and understand the ocean environment so we can make better decisions how to manage it.

A degree in oceanography gives you a firm foundation in biology, chemistry, geology, physics, and math. There's lots of hands-on training, too. At HSU, oceanography students participate in ocean cruises aboard research vessels, collecting samples with traditional and state-of-the-art oceanographic equipment. At the HSU Marine Lab and on campus computer labs students learn how to analyze and interpret their samples and data. In other courses, they learn how to write up and communicate their work effectively and professionally. There are frequent opportunities for students to participate in ocean research projects.

Small class sizes and an engaged faculty ensure that you will get personal attention. Your oceanography faculty advisor will help you focus your educational objectives and plan your career goals. Prized by employers because of their skills and background, our oceanography students excel in a wide variety of occupations.





Your Career

Employers include:

- STATE AND FEDERAL AGENCIES ◀
- AQUACULTURE AND MARICULTURE COMPANIES ◀
- COMMERCIAL PUBLIC AQUARIUMS ◀
- MUSEUMS, SCHOOLS AND UNIVERSITIES ◀
- ENVIRONMENTAL CONSULTING COMPANIES ◀
- STREAM RESTORATION COMPANIES ◀
- NON-GOVERNMENT AGENCIES ◀

Careers include:

- AQUARIUM CURATOR ◀
- FISH BIOLOGIST ◀
- FISH MODELER ◀
- FISH MANAGEMENT ◀
- FISH STATISTICIAN ◀
- COMMERCIAL FISHERIES ◀
- FISH CULTURIST ◀

For more information:

www.humboldt.edu/~fish
Phone: 707.826.3953

Fisheries Biology

Fisheries Biology is the study of the biology, ecology, management, husbandry and production of both marine and freshwater fishes. The HSU Department of Fisheries Biology is uniquely equipped to provide students with in-depth training in all these areas. The department maintains its own on-campus salmon and trout hatchery. Modern on campus facilities also include teaching and research laboratories for the study of fish genetics, pathology, age and growth, and ecology, all of which are supported by in-depth coursework.

The HSU Marine Lab supports a wide range of studies on the biology and ecology of marine fishes, both finfish and shellfish culture, and studies on the early life history stages of marine fishes. A state-of-the-art seawater system at the HSU Marine Lab provides climate controlled unlimited seawater for both teaching labs and research tanks. Our 5,000 gallon public display aquaria offers students the opportunity for training in captive fish husbandry.

Commercial fisheries in the Pacific Northwest are under much scrutiny as a result of long standing fishing pressures and environmental changes. Many students are attracted to Fisheries Biology because of the opportunities available to them to improve both commercial and recreational fishing for the marine and freshwater fishes found in the region. The Department of Fisheries Biology provides real world management experiences and training for those students interested in fish management and restoration.

The unique location of HSU on the northern California coast means that Fisheries Biology students have regular access to rivers, lakes, streams, estuaries, coastal lagoons, beaches, rocky intertidal pools, and the open ocean. The outstanding award-winning faculty and excellent laboratory and field resources mean that 80-90% of the graduates secure fisheries related employment upon graduation.





Your Career

Employers include:

STATE AND FEDERAL AGENCIES ◀

RESEARCH LABS AND PRIVATE COMPANIES ◀

NON GOVERNMENT AGENCIES ◀

SCHOOLS AND UNIVERSITIES ◀

MUSEUMS, AQUARIUMS, ZOOS ◀

ENVIRONMENTAL LABS ◀

CONSULTING COMPANIES ◀

Careers include:

MARINE BIOLOGIST ◀

TEACHER ◀

RESEARCH LAB TECHNICIAN ◀

PARK MANAGER ◀

ANIMAL CARE WORKER ◀

RESEARCH ANALYST ◀

MODELER ◀

For more information:

www.humboldt.edu/~biosci

Phone: 707.826.3245

Biological Sciences

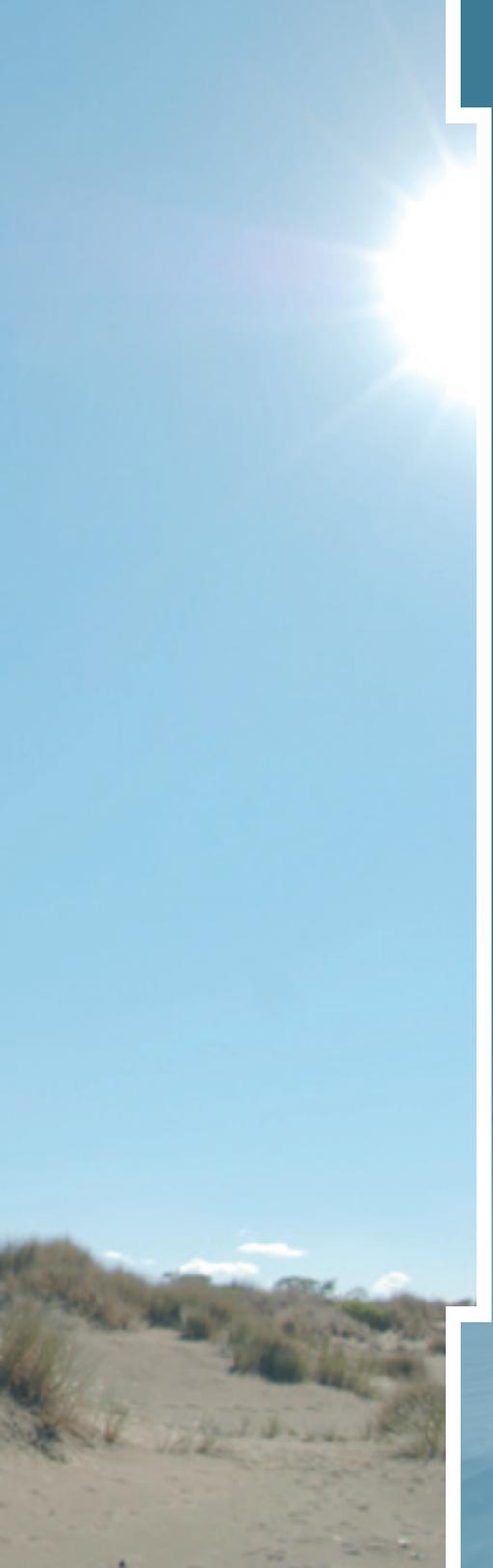
The Biological Sciences include studies of animals, plants, microbes and their relationships, ecology, physiology, behavior and distribution. The Marine Biology option in this department is the largest option in the largest major on the campus. At HSU, through coursework, field trips and both field and lab experiences you will have an opportunity to become familiar with all life forms and their interactions. Many faculty in the Department of Biological Sciences have both teaching and research interests and expertise in marine plants and animals. The department is equipped with modern lab and field equipment to enable the students' full access to our pristine environment and the exciting worlds to be explored in the labs.

Several classes are taught at the HSU Marine Lab, which supports the lab-based use of living marine plants and animals. The lab's location provides for ready access to the local tidepools, beaches, and coastal zones. The R.V. Coral Sea is used by faculty and students on day long field trips to observe pelagic marine mammals.

Small class sizes and a diversity of potential courses mean students in this program have close mentoring by the faculty and a broad appreciation of the sciences. Many students pursue advanced academic work in the nation's top graduate programs, while others seek local, regional, and national employment.







Northern California Institute of Marine Sciences

In the faculty-produced strategic plan for the Marine Sciences written in 2002, one new element was the development of the NC IMS. The purpose of NC IMS is to bring faculty from all of the departments in the College of Natural Resources and Sciences interested in Marine Sciences to one forum. Representatives from Oceanography, Biological Sciences, Fisheries Biology, Geology, Wildlife, and Environmental and Natural Resource Sciences meet on a regular basis to foster research and educational opportunities for students and faculty.

Wildlife

The Department of Wildlife at Humboldt State University comprises a diverse and interactive group of scientists and students whose work focuses on the applied ecology of vertebrates, especially marine birds and mammals. Our educational mission is to provide students with the knowledge and skills to critically evaluate information and solve problems in Wildlife Biology and to enhance their roles as responsible citizens of the earth.

Geology

The Geology Department at Humboldt State University provides an outstanding program at both the undergraduate and graduate levels. Our unique location atop the Cascadia subduction zone provides a natural laboratory for the study of neotectonics and surficial processes. Our nationally acclaimed faculty is committed to quality field-oriented instruction and the involvement of students in all aspects of their research programs.

Environmental and Natural Resource Sciences

Access to quality facilities is one key to an outstanding natural resources education. Unlike some larger universities, here at Humboldt ENRS students have plenty of opportunities to apply their classroom learning to real situations. From the Spatial Analysis Lab (GIS and Remote Sensing) to the natural laboratory right outside our front door, HSU students have access to a wide variety of natural resource-based educational and recreational opportunities. An abundance of parks, forests, nature preserves, and wildlife sanctuaries are located nearby to enhance your learning experience.

Marine Sciences at HSU

Located on the pristine coast of northern California, Humboldt State University is in the ideal location to support any student's interest in the Marine Sciences. The University has made the investment in state-of-the-art teaching and research laboratories, a Marine Lab on the coast, a public aquarium, a natural history museum, and its own 90' ocean going research vessel, the RV Coral Sea.

Students and faculty enjoy the recreational opportunities of the ocean, rivers, and natural forests of the area. A vibrant arts community is located in Arcata, with galleries, plays, concerts, and films readily available. Come join us in our community of scholars and explore all the opportunities of the ocean realms.



Humboldt State University

1 Harpst Street
Arcata, California, 95521

www.humboldt.edu/~cnrs

HSU is an AA/EO Institution

