

# MARINE SCIENCES



UCONN AVERY POINT

**get your feet wet**

# WHAT IS MARINE SCIENCES?



A Bachelor's degree program in Marine Sciences provides opportunities to learn about science of the marine environment and its relationship to society. This program is designed to inspire you intellectually and challenge you academically. The curriculum integrates courses in marine biology, chemistry, geology and physics with studies in policy, law, economics, and resource management of marine environments. The program is quantitative, practical, and experiential in nature. Starting your first semester, most of the courses in your major include work in many of the region's various marine habitats. Learning through hands-on experiences, you'll get your feet wet and your hands dirty. The program is analogous to a rigorous environmental sciences degree, but focused on the environment that covers more than two thirds of the planet...the oceans.

You will take many or all of your classes at the University of Connecticut's Avery Point campus, an environment immersed in research, outreach, and marine education. The campus is located on the shore of Long Island Sound. Students beginning the program at the Storrs campus will typically join the Avery Point community for the last two years of their coursework, or earlier to take advantage of independent research opportunities. The Avery Point campus is home to many organizations and facilities which can provide you with opportunities to learn beyond the classroom. You will benefit from access to the University of Connecticut's fleet of research vessels, and state-of-the art laboratories and classrooms in the marine sciences and technology facility.

*“Combine a love for the sciences  
with a passion for the ocean”*

# CAREERS IN MARINE SCIENCES

A degree in Marine Sciences prepares graduates for a wide range of fields, including research technician, environmental consulting, fisheries and resource management, science education, conservation, environmental regulation, policy and law, as well as graduate study in the marine sciences (oceanography and marine biology). The highly unique curriculum results in graduates who are excellent scientists that also possess the ability to effectively communicate scientific issues to non-scientists such as economists, regulators, and politicians.

For a student who wishes to combine a love for the sciences with a passion for the ocean and the coastal environment, the Marine Sciences degree from the University of Connecticut can provide education leading to a challenging and exciting career.

Are you interested in marine sciences but not sure about a career? Here is a sampling of the types of careers a student with a background in the marine sciences may be qualified to pursue:

- Marine Ecologist
- Fisheries / Shellfish Biologist
- Environmental Consultant
- Oceanographer
- Marine Education
- Aquatic Chemist
- Aquaculture
- Eco-tourism
- Environmental Writer
- Federal/State Environmental Protection
- Non-profit Conservation
- Science Teacher

This web site, <http://www.marinecareers.net>, explores a wide range of marine science related careers and introduces you to the men and women who work out in the field and in labs, helping to preserve and protect our oceans and coastlines.

Also, to find out what recent graduates of our program are doing now, just visit our web site: <http://marinesciences.uconn.edu/marine>.





## COURSES DESIGNED TO INSPIRE AND CHALLENGE YOU

The Marine Sciences curriculum blends a core of marine science courses with relevant, ocean-related social science courses in small classes taught by top-notch faculty, emphasizing practical, hands-on experience. The program is unique in the extent and frequency of field and lab work integrated throughout the curriculum. The structure of the major includes the following:

**Foundation Courses** provide solid preparation for your more advanced classes in Marine Sciences. These classes include Biology, Chemistry, Physics, and Mathematics as well as Introduction to Oceanography.

**Marine Sciences Core Courses** are specifically designed for the Marine Sciences major. All offer an integrated, holistic presentation of interdisciplinary perspectives related to the coastal and ocean environments.

**Social Sciences Courses** offered in Economics, Policy, Law, and Management help you to apply your expanding knowledge of marine sciences to issues concerning man's use of the sea.

**Marine Science Electives** are advanced courses in Marine Biology, Physics, and Chemistry. Your choices build on the topics explored in the foundation courses and help you develop areas of expertise.

**Capstone Courses** provide an opportunity to integrate knowledge you gained in earlier courses and apply it to practical situations. These courses are taught in a case-study type format similar to that used by post-graduate business and law schools.

**Electives** can be chosen from any department to tailor your education to your own interests and career goals.

**Optional Internships** offer hands-on experience for juniors and seniors to work in a job setting that utilizes your education. For example, your job may be at a local business, a non-profit organization, or a federal or local government agency.

**Independent Research** credits can be used towards Marine Science Electives. This option formally integrates one-on-one research experience with faculty mentors into the curriculum.

**Minors** in Marine Biology or Oceanography are available with at least 15 credits of 3000 or higher level work.

# COURSES

## MARINE SCIENCES CORE COURSES

**Introduction to Oceanography** – An introductory class with laboratory that emphasizes the interactions and interrelationships of physical, chemical, biological, and geological processes that contribute to both the stability and variability of the marine environment.

**Coastal Systems Science I, II** – A two-semester introduction to the biological, chemical, physical, and geological structure and function of coastal systems. The course is organized around habitats, with an integrated treatment of physics, chemistry, and biology for each.

**Environmental Reaction and Transport** – A systems perspective on chemical and biological relationships that couple the air, land, and sea.

**The Hydrosphere and Climate Change** – A timely course that reviews the role and response of the oceans in a changing global climate.

**Measurement and Analysis in Coastal Ecosystems** – An upper-division course emphasizing field and lab experience in which you design and execute projects to study ecological processes in local coastal habitats, such as salt ponds, estuaries, and Long Island Sound. This course provides practical training on instruments commonly used in the marine and environmental sciences in the public and private sectors.

**Coastal Circulation and Sediment Transport** – An exploration of circulation and mixing in estuaries and the inner continental shelf, and the related geological processes.

## SOCIAL SCIENCES COURSES

**Science and the Coastal Environment** – An in-depth analysis of real-world case studies. Students work in teams to explore the link between science and society in our coastal environment.

**Economics of the Oceans** – This course discusses the economics of industries that use and manage ocean resources. Focus includes the applications of industrial organization, law and economics, natural resource theory, and environmental economics.

**Human Modifications of Natural Environment** – A geographical and historical interpretation of the changing relationships between culture and environment. Emphasis is placed upon the modification of the biophysical environment by pre-agricultural, agricultural and urban societies in Europe, southwest Asia, and North America.

**Environmental Law** – This class is designed as an overview of environmental law including the common law practices of nuisance, negligence, and trespass. Emphasis will be on federal, state, and municipal programs addressing clear air, clean water, hazardous waste, inland wetlands, coastal zone management, and prime agricultural farm land and aquifer protection.

**Geographic Information Systems** – A course that equips students with proficiency in mapping and information management techniques routinely used by employers in the science and policy arenas.

*Please note that this is only a small sampling of courses a student may choose to take. Other courses may include Resource Economics, Marine Fisheries, Integrated Coastal Zone Management, for example.*



## PARTICIPATE IN RESEARCH

Marine Sciences undergraduates are encouraged to explore their chosen field of study first hand. Undergraduate research engages students in the process of inquiry, stimulates independent learning, promotes effective communication skills, and celebrates undergraduate scholarship. Students work closely with faculty in the lab and field. As an old proverb states,

*“I hear, and I forget. I see, and I remember. I do, and I understand.”*

## AT THE AVERY POINT CAMPUS

Ample opportunities for students to explore career options through personal and educational growth are available. A variety of internships are posted at <http://www.averypoint.uconn.edu/experiential/internships.html>. For healthy recreation tied to the curriculum and location, the active and vibrant student community includes both a sailing club and a scuba club.

The campus is a nexus for marine expertise. Other entities on campus include:

**The Rankin Research Laboratory**, a 2,400 square-foot wet laboratory with a greenhouse. Current research projects include the effect of harmful algae blooms on zooplankton and bivalve physiology and fish behavior.

**The Marine Sciences Technology Center**, which supports research efforts by providing small boats, operation of the *R/V Connecticut* and *R/V Weicker*, scientific SCUBA diving, and marine and electronic shops.

**The Connecticut Sea Grant College Program**, part of a national network whose mission is the conservation and wise use of marine resources through research, education, and outreach. The program focuses on healthy coastal ecosystems, aquaculture, sustainable safe seafood, and marine education.

**The Northeast Underwater Research, Technology and Education Center (NURTEC)** supports research and education using advanced underwater technologies such as occupied submersibles, robotic vehicles and mixed gas diving.

<http://marinesciences.uconn.edu/marine>



## FREQUENTLY ASKED QUESTIONS

### How do I apply to the Marine Sciences major?

To apply, visit the UConn website, <http://www.admissions.uconn.edu>, to access the online application or contact the Office of Undergraduate Admissions at 2131 Hillside Road, U-3088, Storrs, CT 06269 or call (860) 486-3137.

### Can I arrange a campus tour?

To set up a Talk and Tour appointment for the Avery Point campus, simply send an email message to: [beahuskyaverypoint@uconn.edu](mailto:beahuskyaverypoint@uconn.edu) or call the Admissions Office at (860) 405-9026. A virtual tour is available at [www.averypoint.uconn.edu](http://www.averypoint.uconn.edu). To tour the Storrs campus, contact the Lodewick Visitors Center at (860) 486-4900 or email [tours@uconn.edu](mailto:tours@uconn.edu).

### Can I take classes at Storrs?

You can take most classes for your first two years either at Storrs or Avery Point. Some lectures may be available at both Storrs and Avery Point through distance learning technology with fully interactive voice and video. You will complete the final two years of your degree program at Avery Point.

### Is there an Honors Program at Avery Point?

Yes. There is an Honors Scholar Program available for students who have earned a specific grade point average. Students in this program will further their education with a research project and senior thesis in their area of choice.

### What housing is available?

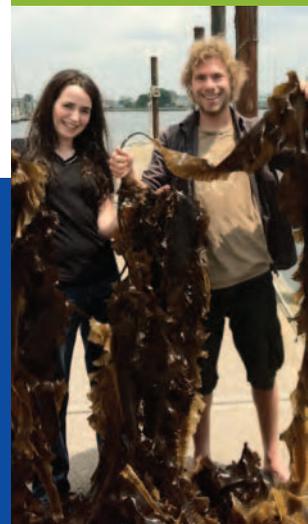
The Storrs campus provides housing on campus. There is no housing at the Avery Point campus. However, off-campus housing within three miles of campus is available at local luxury apartment complexes. Please call the Avery Point Off-Campus Housing Coordinator at (860) 405-9262.

### Is study abroad an option?

Yes. UConn offers more than 300 study abroad programs in more than 65 countries on six continents. Marine science students may study in places like Mexico, Costa Rica, or the Turks and Caicos Islands, to name a few.

*If you do not see your question here, please feel free to call (860) 405-9026, email [marine@uconn.edu](mailto:marine@uconn.edu) or look for answers to your questions at our web site: [www.averypoint.uconn.edu](http://www.averypoint.uconn.edu).*

Information about the Avery Point undergraduate research program (APURP) can be found on the Avery Point web page under “Academics & Research” at [www.averypoint.uconn.edu](http://www.averypoint.uconn.edu). You will get to know faculty and learn about the process of selecting a research topic, conducting your own research, and perhaps presenting your findings at an appropriate colloquium.





UNIVERSITY OF CONNECTICUT  
AVERY POINT CAMPUS

For more information, please contact:

Admissions Office  
UConn Avery Point Campus  
1084 Shennecossett Road  
Groton, CT 06340  
(860) 405-9026  
[www.averypoint.uconn.edu](http://www.averypoint.uconn.edu)



UConn Marine Sciences

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University of Connecticut  
Office of Undergraduate Admissions  
2131 Hillside Road, Unit 3088  
Storrs, CT 06269-3088  
(860)486-3137  
[www.admissions.uconn.edu](http://www.admissions.uconn.edu)

University of Connecticut  
Avery Point Campus Directions

Take I 95 north/south to Exit 87, Route 349/Clarence B. Sharp Highway. Continue on Route 349. At second traffic light, turn right. At next traffic light, which is Benham Road, turn left. Proceed for about 1.5 miles to the entrance of UConn's Avery Point campus. The Admissions Office is located on the third floor of the historic Branford House mansion.

