

MARINE BIOLOGY

Starting in the first year, RWU Marine Biology students get their feet wet on the shores of campus and from onboard RWU's research vessel, the *InVinceble Spirit*. Working with expert faculty, our majors get hands-on, interdisciplinary training that prepares them for professional careers in marine biology.

STUDENT EXPERIENCE

Learn and Do More at RWU

With a focus on experiential learning at RWU, Marine Biology majors:

- Work as scientists from day one, conducting research projects in first-year courses. Students can also perform independent research in the laboratory or in the field, learn to write proposals, compete for grant funding, and complete a senior thesis.
- Collaborate with faculty who are engaged in research in our marine laboratories, including the Wet Lab, Shellfish Hatchery, and Aquatic Diagnostics Laboratory. Our students work on projects to raise oysters for local populations, measure environmental contaminants, including microplastics in marine ecosystems, and assess the biodiversity of marine plankton and animal microbiomes.
- Get to know our local ecosystems aboard the boats in RWU's research vessel fleet.
- Study marine science in one of our off-campus programs: a semester abroad at the Bermuda Institute of Ocean Sciences, Tropical Ecology winter coursework in Belize or Panama, or on a sailing vessel with SEA Semester through the Sea Education Association of Woods Hole, MA.



- + Have you ever wondered how marine species interact with each other and their environment to create a healthy ocean, on which human life depends?
- + Do you want to use your talents and training to preserve and protect life in the sea?
- + Are you curious? Do you enjoy asking questions and solving problems? Do you want to explore the 70% of the Earth's area that exists below the ocean surface?

CAREER OUTLOOK

RWU Marine Biology grads are working as:

- Marine research scientists
- Veterinarians
- Fisheries biologists
- Aquaculture managers
- Aquarium and zoo technicians
- Marine resource managers and policymakers

ALUMNI SPOTLIGHT

“Something so unique to Roger is that we don't have marine science graduate students, so we get to be super hands-on in our research as undergraduates. Being able to take part in world-class research is amazing. It's definitely a highlight of Roger.”

Tommy Demarco '21
Marine Biology
Microbiology Technician at the
Smithsonian Marine Station in Florida

CURRICULUM

Our first-year students dive headfirst into the program with introductory oceanography and marine biology classes. In our upper-level lab and field-based marine coursework, they get first-hand experience with scientific methods currently used by marine scientists. Students choose from our specialized course offerings to customize their program to match their interests and career goals. Students can choose to pursue a Bachelor of Science or Bachelor of Arts degree in Marine Biology.

Get a Great Internship

The hands-on, real-world experience with RWU faculty prepares our students for their marine career paths, and for highly competitive internships in the field. RWU students work with leading marine and environmental research agencies and advocacy organizations. Our students have interned at organizations such as:

- New England, Mystic, & Baltimore Aquariums
- Save the Bay
- Audubon Society
- Center for Coastal Studies
- U.S. Environmental Protection Agency
- R.I. Department of Environmental Management
- Woods Hole Oceanographic Institution & Marine Biological Laboratory

Research Opportunities

Undergraduate research is a major part of the Marine Biology experience.

Many of our students do independent research with our faculty and present their findings at regional, national, and international conferences. Our students have completed research alongside faculty mentors in several areas, including:

- Functional morphology of jellyfish
- Evolution and ecology of marine viruses
- Ecology of temperate corals and their microbiome
- Diagnostics of marine fish and shellfish diseases
- Marine ornamental fish and invertebrate aquaculture
- Shellfish aquaculture, ecology, and larval biology

Laboratories and Technology

Unlike other universities that use offsite facilities, **RWU is a marine station.** Located only a few hundred yards from Mount Hope Bay, the Marine and Natural Sciences (MNS) building has direct access to the water and is a fully functional wet laboratory, providing students the opportunity to conduct marine field- and lab-based research.

The MNS building is equipped with a Wet Lab, Shellfish Hatchery and Farm, Aquatic Diagnostic Laboratory, and a greenhouse. MNS houses advanced laboratory resources, including a confocal laser microscope, an epifluorescence microscope, a flow cytometer, a particle counter, thermal cyclers, controlled environmental chambers, and analytical chemistry instrumentation.

Onboard RWU's research vessel, the *InVinceble Spirit*, students launch from our own dock for coursework, water quality testing, and collection of aquatic organisms, and can be back on campus in time for their next class.

Upper-Level Coursework

Students choose from over thirty upper-level courses, including:

- Marine Mammalogy
- Invertebrate Zoology
- Biology of Plankton
- Fisheries Science
- Aquatic Animal Health
- Aquaculture
- Ecology of Marine Natural Products
- Marine Resource Management
- Scientific Research Diving

Prepare for Graduate School

Our majors are well prepared for graduate school; our students have attended Scripps Institution of Oceanography, Harvard University, Duke University, and Virginia Institute of Marine Science, among many others. *Last Updated: July 2021*

OVER 80% OF RWU STUDENTS GRADUATE WITH MORE THAN JUST A SINGLE MAJOR

Design your experience with your passion and have a unique career advantage with a minor or double major. Many students combine **Marine Biology** with:

- Aquaculture and Aquarium Science
- Applied Mathematics
- Public Health
- Sustainability Studies
- Biotechnology Certificate