

# 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 own 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 can:

- Work as scientists from day one. Many students start research projects in their first year conducting fieldwork, writing research proposals, and presenting their research at national and international conferences.
- 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 re-establish oyster populations, examine mercury contamination in local fish, and monitor microplastic pollution in local ecosystems, among others.
- Get to know our local ecosystems aboard one of 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

“I took advantage of every opportunity I could and the whole experience was so much more than I expected. When I look back and think of all the things I've been able to do while [at RWU], it's just unbelievable.”

-Ava Mastrostefano '18

Enrolled in Tufts University's veterinary program

## CURRICULUM

Our first-year students dive headfirst into the program with introductory oceanography and Marine Biology. In our upper-level lab and field-based marine coursework, they get first-hand experience with scientific methods currently used by marine scientists, and choose from our specialized coursework for a program that is customized to fit their interests. 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:

- Mystic Aquarium
- New England Aquarium
- Save The Bay
- Audubon Society
- U.S. EPA
- R.I. Department of Environmental Management
- Woods Hole Oceanographic Institution

### 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 faculty have mentored student research in a number of areas, including:

- Functional morphology of jellyfish
- Characterization of viruses in Mount Hope Bay
- Microplastics pollution and coral reef ecology
- Population studies of harbor seals
- Marine ornamental fish aquaculture
- Shellfish restoration

### Laboratories and Technology

Unlike other universities that use offsite facilities, **RWU is a marine station**. Located just a few hundred yards from Mount Hope Bay, the Marine and Natural Sciences (MNS) building pumps saltwater straight from the bay, providing students the opportunity to conduct authentic marine research right in the classroom.

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.

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

### Upper Level Course

Students also choose from a number of upper level courses, including:

- Marine Mammalogy
- Fisheries Ecology
- Biology of Plankton
- Neotropical Marine Biology in Panama
- Tropical Ecology in Belize
- Ecology of Marine Natural Products

### Prepare for Graduate School

Our majors are well prepared for graduate school; our students have attended Scripps Institution of Oceanography, University of Rhode Island, and Harvard University, to name a few.

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

RWU students have paired **Marine Biology** with:

- Aquaculture and aquarium science
- Applied mathematics
- Public health
- Sustainability studies
- Biotechnology certificate