

AQUACULTURE AND AQUARIUM SCIENCE

Working with expert faculty, our majors get interdisciplinary training that prepares them for careers in Aquaculture and Aquarium Science, multi-billion dollar professions that are important in the global trade and food supply.

STUDENT EXPERIENCE

Learn and Do More at RWU

With a focus on experiential learning at RWU, Aquaculture and Aquarium Science majors can:

- Grow species that have never before been raised in captivity – like the Queen Triggerfish. Learn husbandry techniques to breed and maintain a variety of marine animals in culture, including shellfish, ornamental shrimp and fish, corals, and their food sources.
- Design and build systems for ornamental species production and large-scale aquarium exhibits. Our students designed the Rhode Island Audubon Society Nature Center and Aquarium.



- + Have you always enjoyed visiting the aquarium to learn about the complex and fascinating life in and around the water?
- + Would you like to be involved in securing the future of global food production?
- + Are you excited about research on production of shellfish and aquarium fish?

CAREER OUTLOOK

RWU Aquaculture and Aquarium Science alumni are working as:

- Veterinarians
- Aquarists
- Shellfish Hatchery Managers
- Breeders
- Fisheries Biologists
- Research Scientists

ALUMNI SPOTLIGHT

“This wasn’t just research – it was also a cool engineering project. [In Aquarium Science], you have to be a carpenter and you have to be a plumber [to build the systems that allow you to care for the fish].”

Erin Gaglias '19
Field technician
Riptide Oyster Farm

Learn and Do More at RWU

- Solve real-world problems faced by the aquaculture and aquarium science industries. For example, RWU students organize the data on marine ornamental species imported into the U.S., which helps customs agents identify illegally harvested and endangered species.
- Collaborate with faculty who are engaged in research in our laboratories. Our students work on projects to develop a test to detect illegal cyanide fishing, innovate probiotic treatments for rearing larval shellfish, screen marine animals and microbes for novel antibacterial properties, and participate in research of aquatic animal disease detection and prevalence.

CURRICULUM

Our first-year students start with foundational courses in biology, chemistry, and physics. In our upper level coursework, students learn how to design and build aquarium systems and understand the complex processes of keeping animals alive and healthy enough to reproduce. Students can conduct interdisciplinary research, perform field work, experiment in laboratories and complete internships. These opportunities provide experience - both on-campus and at public aquariums - working with marine ornamental species, growing shellfish, and creating and maintaining aquariums. In order to guarantee a broad undergraduate experience, the program requires students to select a second major.

Upper Level Coursework

Students can choose from a number of specialized courses, including:

- Aquarium System Design
- Aquatic Animal Husbandry
- Aquatic Animal Health
- Museum Exhibit Development
- Ecology of Marine Natural Products

Internship Opportunities

RWU students have interned at Mystic Aquarium, Rhode Island Audubon Society, Woods Hole Oceanographic Institution, and R.I. Department of Environmental Management, among many others. Through an innovative partnership, RWU students can intern at the New England Aquarium as a semester-long course, conducting research with an NEAQ scientist. They gain experience that includes feeding animals, cleaning tanks and equipment, and providing treatment for diseased animals.

Laboratories and Technology

Wet Lab

With saltwater pumped directly from the bay, RWU is a marine station equipped for unique Aquaculture and Aquarium Science research. Inside the marine labs, students develop methods for breeding fish and invertebrates and improving the systems for farming and raising species in captivity.

Shellfish Hatchery & Aquaculture Farm

The Shellfish Hatchery gives students experience raising a variety of shellfish for consumption and restoration, while improving commercial production techniques. Students also work on a dockside shellfish nursery and on a commercial-scale aquaculture farm on the RWU waterfront. We even have our own brand of oysters – *Ferrycliffe Oysters*!

Aquatic Diagnostics Laboratory

Unique to RWU, the laboratory is managed by our resident aquatic veterinarian. Students help provide diagnostic testing, using the latest technology, that focuses on diseases of aquatic animals.

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

RWU students have paired **Aquaculture and Aquarium Science** with:

- Marine Biology
- Biology
- Chemistry
- Environmental Science