

# 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:

- 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.



+ Do you enjoy visiting the aquarium?

+ Would you like to be involved in securing the future of global food production?

+ Are you excited about research on the 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  
Aquaculture and Aquarium Science  
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 analyze 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 including developing a test to detect illegal cyanide fishing, innovating probiotic treatments for rearing larval shellfish, and screening marine animals and microbes for novel antibacterial properties. They 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 design and build aquarium systems and understand the complex processes of keeping animals alive and healthy enough to reproduce. Students conduct interdisciplinary research, perform fieldwork, 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. All students select a second major, guaranteeing a broad undergraduate experience.

## Upper-Level Coursework

Students 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 intern at the 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 treating 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 – *Ferrycliff 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**

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

- Marine Biology
- Biology
- Chemistry
- Environmental Science