



Careers in Aquaculture

Degrees in aquaculture are growing in popularity and are offered through undergraduate and graduate programs. Most aquaculture degree programs combine core courses in aquatic biology and ichthyology with hands-on experience and research projects. Students explore chemistry and microbiology and learn about fish diseases and nutrition. They often gain experience through an internship at a school or commercial facility.

Individuals enrolling in an associate's or bachelor's degree program in biology, chemistry, fisheries, aquaculture, environmental science or similar should have a high school diploma or at least a GED.

Popular Careers

Although an academic degree in fishery science and aquaculture can prepare graduates for several different types of positions within the commercial aquaculture field, careers in aquaculture are multidisciplinary and there are several ways to gain experience and enjoy a career in aquaculture. There are many careers that do not require a degree, such as farm worker or technician.

- Aquaculture Economist
- Aquaculture Engineer
- Aquaculture Marketer
- Aquaculture Technician
- Aquarium Curator or Aquarist
- Certified Processor
- Chef
- College Professor
- Commercial Farmer
- Diagnostic Lab Manager
- Ecologist
- Extension Agent
- Food Safety Inspector
- Hatchery Manager
- Law Enforcement
- Researcher
- State or Federal Inspector
- State or Federal Regulator
- Teacher
- Veterinarian or Epidemiologist



A career in aquaculture can be very rewarding!

High School Diploma or GED

Although degrees can enhance understanding of fish biology and aquaculture practices, there are many careers that may not require a higher education degree. Obtaining an [Aquaculture Certification](#) in high school from [The Florida Aquaculture Association](#), will jumpstart your career in aquaculture. With a high school diploma or GED, it may be possible to find employment on a farm or aquarium as a technician, farm worker or in marketing.

Associate of Applied Science in Aquaculture or Technical Degree

Aquaculture associate degree programs are 2-year programs of study and ideal for individuals who aspire to work as aquaculture technicians with commercial businesses. Students gain a basic understanding of fisheries management while also learning the basics of fish nutrition, fish disease and aquatic biology. They often gain practical experience by working at a local college hatchery or even a nearby commercial facility.

The courses included within associate's degree programs in aquaculture provide students with the vocational skills and training they need to gain an entry level job at a hatchery or on a farm. Some core courses and general education courses that might be included are anatomy and physiology, biosecurity and chemistry. Other courses that might be included are:

- Fish and Nutrition
- Fisheries Management
- Microbiology
- Principles of Animal Science

Bachelor of Science in Aquaculture

Students enrolled in a 4-year degree program in aquaculture gain the basic knowledge and skills necessary to farm aquatic organisms like crustaceans, mollusks and fish. In the United States, many schools combine bachelor's degree programs in aquaculture with degree programs in fisheries management. Students learn how to assess and manage the population of fisheries, manage fish hatcheries and aquaculture environments, and monitor and enhance aquatic environments.

Bachelor's degree programs in aquaculture start with basic courses in biology and laboratory science before moving to more specific, vocational courses in fish hatchery management. Some examples of core courses include marine biology, advanced fish biology and physiology, and ecology. Additional courses could include:

- Aquatic Resources Management
- Geospatial Science and Technology
- Hatcheries Management
- Organic Chemistry

Master of Science in Aquaculture

Graduate degree programs in aquaculture build upon previously gained knowledge of aquatic biology and basic management principles. Students gain the knowledge and tools necessary to oversee the production of aquatic species in controlled environments such as hatcheries. They learn how to manipulate aquatic environments to achieve better commercial results and protect species from disease. They also study the legal, technological and environmental aspects of aquaculture.

Many master's programs in the field require students to complete a thesis paper or project that pushes research or explores new technology. Universities offering graduate degree programs in aquaculture require incoming students to hold a bachelor's degree in aquaculture, biological science or a related field.

Master's degree programs in aquaculture include advanced courses that prepare students to handle both the technical and business aspects of aquaculture management. Specific core courses might include fish genetics, fish diseases, biostatistics, and fish nutrition. Additional courses could include:

- Business and Marketing
- Production Method
- Spawning Technologies
- Water Quality

See [AgCareers.com](#) and [Aquaculture Business Resources](#) for more information on aquaculture careers and education.

