



Distance Education

## Marine Biology and Sustainable Aquaculture Bachelor's Degree (2020-2021)

The B.S. in Marine Biology and Sustainable Aquaculture prepares students for a broad range of careers helping protect, preserve, maintain, and grow marine organisms and environments. This degree provides students with a broad emphasis on both marine biology and aquaculture and encompasses coursework with the rigor to prepare students for further study in graduate school or even starting their own aquaculture enterprise.

Graduates of the B.S. in Marine Biology and Sustainable Aquaculture will be able to:

1. Explain the underlying biological principles and functioning of marine and aquatic organisms at structural levels ranging from molecular to ecosystem.
2. Choose and implement appropriate laboratory and field techniques used in marine organismal observation, research, management, and care, including those in wild, cultured, and farmed settings.
3. Compare and contrast the major types and components of aquaculture systems, species, and factors as they relate to both environmental and systematics sustainability.
4. Create local, regional, and global solutions to environmental problems in marine biology and aquaculture.
5. Critically evaluate information using scientific and quantitative reasoning skills.

### Program Core

BIOL 203 Ecological Principles: Applications to Conservation and Wildlife

CHEM 101 Chemistry I

CHEM 102 Chemistry I Laboratory

MBAQ 105 Introduction to Oceanography

MBAQ 201 Form and Function of Unique Marine Ecosystems

MBAQ 203 Global Diversity of Freshwater and Marine Resources Used in Sustainable Harvest

MBAQ 301 Sustainable Aquaculture Techniques I: Growing Shellfish and Finfish

MBAQ 303 Sustainable Aquaculture Techniques II: Crustaceans and Pathobiology

MBAQ 307 Ichthyology and Fish Health

MBAQ 310 Marine Mammal and Seabird Biology **OR**

MBAQ 315 Diversity of Marine and Aquatic Vegetation

MBAQ 401 Field Research in Marine Biology and Aquaculture

### Environmental Professional Core

EVPC 101 Professional Skills

EVPC 201 Environmental Issues: Deforestation, Biodiversity Loss, and Overpopulation **OR**

EVPC 202 Environmental Issues: Energy, Water Scarcity, and Waste

EVPC 301 Environmental Justice **OR**

EVPC 305 Building a Better World: Ethical Decision-Making

EVPC 401 Transformational Leadership

EVPC 490 Transdisciplinary Capstone

### **General Education Core**

BIOL 103 Biology: Foundations of Life

BIOL 104 Biology: Foundations of Life Laboratory

BIOL 105 Biological Diversity, Ecology, and Evolution

BIOL 106 Biological Diversity, Ecology, and Evolution Laboratory

ENVS 201 The Warming Planet: Understanding Climate Change

MATH 101 College Algebra for Environmental Professionals

MATH 201 Statistics for Environmental Professionals

An Arts course

2 Communication courses

A Humanities course

A Language course

A Social Science course

### **General Electives**

39 credits of general electives (*Students looking to attend graduate school should take Calculus, Chemistry II with lab, Organic Chemistry I with lab, Physics 1 & 2 with labs, Cell Biology, Microbiology, Wildlife Conservation Genetics, and Biochemistry with lab.*

*Additional recommended options include 1 credit courses such as Scientific Diving and Small Boat Handling, Operation, and Maintenance.)*

College Wide Requirements: *A minimum of 120 earned credit hours, 30 credits at the 300 level or above, a minimum of 30 credits earned at Unity, and an overall cumulative GPA of 2.0 or above*