Marine Biology and Sustainable Aquaculture Bachelor’s Degree (2019-2020)

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 Agriculture 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.
6. Demonstrate proficiency in written, oral, interpersonal communication, and critical thinking.

Program Core
BIOL 203 Ecological Principles: Applications to Conservation and Wildlife
CHEM 101 Inorganic Chemistry 1
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 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
40 credits of general electives (Students looking to attend graduate school should take Calculus, Inorganic Chemistry 1 Lab, Inorganic Chemistry 2 with lab, Organic Chemistry 1 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