Immersive, Inquiry-Based Science

For over thirty years, Northeastern University’s Three Seas Program has been the pathway for a select group of aspiring marine scientists to live, explore, collaborate, and work in the environments they are studying. This unique, immersive program, completed for graduate credit, serves as the foundation of Northeastern’s Master of Science in Marine Biology.

Three Seas’ inquiry-based curriculum in marine science seamlessly integrates lecture, lab, and field activities on-location in three distinct ecosystems. The knowledge, skills, and perspective gained throughout this intense field-study program are then broadened and amplified by two critical elements of the master’s program: a six-month internship and an independent research project of each student’s design, with findings presented upon completion of the program in oral and written form.

High Caliber Faculty

Students have the unparalleled opportunity to learn from a faculty of renowned scientists actively conducting research programs in their marine specialties. Assembled from research laboratories in academia, government agencies, and the private sector, these gifted researchers are also experienced educators who have an average of over 10 years teaching experience with the program.

Inquisitive, Independent Minds

Individuals accepted in the program work side-by-side with a select group of like-minded students from across the country and around the world—each passionate about marine biology, research-focused, fieldwork-oriented, and fiercely independent. Their learning, research, and field experiences help them refine and confirm career goals. They leave the program fully prepared to plan and execute marine research, well equipped to embark on any path they choose.
A Program Like No Other

Northeastern’s Master’s of Science in Marine Biology delivers a unique combination of inquiry-based study, fieldwork, research, and workplace experience. It is a program in which students learn science by doing science and emerge as capable, confident marine scientists.

• In conjunction with the university’s Three Seas Program, students spend a full academic year immersed in the study of marine biology in three distinctly different marine ecosystems.

• Each year the Three Seas Program accepts a maximum of 24 students, assuring unequaled access to and support from program faculty.

• The program’s rigorous, inquiry-based curriculum in marine science is completed in 15 months.

• Students are guided and challenged by a faculty comprised of renowned marine researchers.

• Student divers receive a Scientific Diving certification through the American Academy of Underwater Sciences.

• A six-month internship and concurrent independent research project extend practical experience and refine research skills.

• Graduates of the program have a proven record of acceptance in the top marine biology PhD programs across the country, as well as success in a variety of marine-related careers.

“Our program is the ultimate example of Northeastern University’s experiential learning model. Each year we work with a small, elite group of dedicated students who, upon completion of the program, emerge as knowledgeable, skilled marine scientists prepared to enter the most competitive PhD programs or research facilities, to conduct and publish valuable research, and to become future industry leaders.”

— Steve Vollmer, PhD
Northeastern University
Associate Director, Marine Science Center
# Immersive Program

## MASTER OF SCIENCE IN MARINE BIOLOGY / THREE SEAS PROGRAM

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<td><strong>Vibrant Research-Active Communities</strong></td>
<td><strong>Three Diverse Marine Ecosystem</strong></td>
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<td><strong>FALL: NEW ENGLAND</strong></td>
<td>Prevailing coastal currents provide exceptionally clean and stable seawater. Intertidal and subtidal communities are ideally suited for investigations of rocky shore ecology. An extensive field trip to the Maine coast provides the opportunity to experience variations in New England marine habitats.</td>
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<tr>
<td>Northeastern University</td>
<td>This diverse tropical ecosystem and geographical location, with fringing coral reefs and lagoon, seagrass, and mangrove habitats, serves as classroom and laboratory on the Caribbean and on a Pacific coast field trip.</td>
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<td>Marine Science Center</td>
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<td><strong>WINTER: THE CARIBBEAN</strong></td>
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<tr>
<td>Smithsonian Tropical Research Institute</td>
<td>In the cold and well-mixed waters of Puget Sound, marine flora and fauna are exceptionally diverse. Rocky shores, mud flats, sandy beaches, kelp forests, and a range of subtidal environments provide a varied landscape for exploration, research, and discovery.</td>
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## INTERNSHIP & RESEARCH PROJECT

Classroom, laboratory, and field experience culminate in a 6-month internship in either an academic setting or the private or public sector. The program staff works with students on an individual basis to pursue internships specific to their career and research interests. Past interns have worked for the New England Aquarium, the National Oceanic and Atmospheric Administration, Wrigley Marine Science Center, Rosenstiel School of Marine & Atmospheric Science, Darling Marine Center, among others.

Students concurrently complete an independent research project of their own design, and report their findings in a 15-minute oral presentation and a journal-style report. Since the program’s inception, over a dozen research reports authored or co-authored by students have been published in peer-reviewed journals.

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Immersive Program

MASTER OF SCIENCE IN MARINE BIOLOGY / THREE SEAS PROGRAM

LOCATIONS

Vibrant Research-Active Communities

ENVIRONMENTS

Three Diverse Marine Ecosystems

CURRICULUM

Inquiry-Based Study and Research

FALL: NEW ENGLAND
Northeastern University
Marine Science Center
Nahant, MA
14-weeks

Prevailing coastal currents provide exceptionally clean and stable seawater. Intertidal and subtidal communities are ideally suited for investigations of rocky shore ecology. An extensive field trip to the Maine coast provides the opportunity to experience variations in New England marine habitats.

Marine Biology Careers Seminar
Marine Botany & Lab
Marine Invertebrate Zoology
Marine Ecology
Experimental Design in Marine Ecology
Diving Research Methods

WINTER: THE CARIBBEAN
Smithsonian Tropical Research Institute
Bocas del Toro, Panama
10-weeks

This diverse tropical ecosystem and geographical location, with fringing coral reefs and lagoon, seagrass, and mangrove habitats, serves as classroom and laboratory on the Caribbean and on a Pacific coast field trip.

Biology of Corals & Coral Reefs
Biology and Ecology of Fishes
Tropical Terrestrial Ecology
Ocean and Coastal Processes
Coral Reef Ecology

SPRING: PACIFIC NORTHWEST
University of Washington
Friday Harbor Laboratory
San Juan Island, Washington
8-weeks

In the cold and well-mixed waters of Puget Sound, marine flora and fauna are exceptionally diverse. Rocky shores, mud flats, sandy beaches, kelp forests, and a range of subtidal environments provide a varied landscape for exploration, research, and discovery.

Marine Birds and Mammals
Marine Conservation Biology
Physiological and Molecular Marine Ecology

INTERNSHIP & RESEARCH PROJECT

Classroom, laboratory, and field experience culminate in a 6-month internship in either an academic setting or within the private or public sector. The program staff works with internships hosts include the New England Aquarium, the National Oceanic and Atmospheric Administration, Wrigley Marine Science Center, Rosenstiel School of Marine & Atmospheric Sciences, and Darling Marine Center, among others.

Students concurrently complete an independent research project of their own design, and report their findings in a 15-minute oral presentation and the submission of a journal-style report. Since the program’s inception, over a dozen research reports authored or co-authored by students have been published in peer-reviewed journals.

SUMMER

Full-time internship
Marine Biology Graduate Internship
Marine Biology Graduate Internship Tutorial

FALL: YEAR 2

Full-time internship
Marine Biology Graduate Internship
Marine Biology Graduate Internship Tutorial
Marine Biology Research Project

“This program has been life-changing. The hands-on experiences and networking opportunities throughout the entire 15 months have been extremely valuable. As an incoming student with limited knowledge in marine systems, I now feel fully prepared to pursue my PhD, and ultimately a career in marine biology.”

—Jennifer Davidson
MS Marine Biology ’13
Apply Today

Your passion is research, your focus—marine biology. In Northeastern University’s Master of Science in Marine Biology, you have found the unique, non-thesis graduate program that combines both in the field, classroom, laboratory, and workplace. Fulfill your passion. Meet your career goals. Apply today through the university’s online system at www.northeastern.edu/marinebiologypsm/application-info.

Timing:

- Students are admitted for the fall semester. Deadline for priority admission is February 1. Applications received after that date are reviewed on a rolling admissions basis.

Requirements:

- Bachelor of science in biology, biochemistry, chemistry, engineering, environmental science, or geology* from an accredited college or university. Introductory biology and two additional biology electives (genetics and ecology) are advised.

- Completion of the online application accompanied by your personal goal statement, three letters of recommendation, general GRE scores, and official transcripts. Curriculum vitae is optional.

- TOEFL/IELTS scores if you are from a non-English speaking country

- Recommended, although not required:

  Given the intense field-oriented curriculum, complex logistics, and high cost** of the program, an informational visit to the Marine Science Center in Nahant is advised, preferably during the fall semester when the program is in residence.

*Students with degrees outside these disciplines should contact the program staff to discuss eligibility.

**The demanding requirements and accelerated timeline of the program preclude opportunities for teaching or research assistantships. As a result, students must pay their own tuition. For information on current tuition and financial aid, please visit northeastern.edu/marinebiologypsm/prospective-students/program-cost.

For more information, please contact: threeseas@neu.edu
www.northeastern.edu/marinebiologypsm

Northeastern University
College of Science