



B.S. Degrees
Marine Biology
Marine Science

Program Overviews

The Corning School of Ocean Studies at Maine Maritime Academy will refine and direct your science skills for use in a career related to the oceans. Our broad-based approach allows you career flexibility as you work toward a Bachelor of Science degree in one of two majors:

- **Marine Biology**
- **Marine Science**

Which major is for you? All Corning School students build a solid science foundation and receive instruction in math, physics, and humanities.

Marine Biology students develop subject breadth through courses in marine botany and zoology, ecology, physiology, cell biology, and genetics.

Marine Science students study the ocean from an interdisciplinary perspective. Their studies encompass biology, chemistry, geology, and physics of the ocean environment.

Both majors lead to many career and advanced study options. Courses in these majors include:

Marine Biology:

- Marine Botany
- Ecology
- Genetics
- Marine Zoology
- Physiology
- Cell Biology

Marine Science:

- Physical Geology
- Marine Geology
- Marine Botany/Zoology
- Sedimentology
- Marine Geochemistry
- Physical Oceanography

Why Maine Maritime Academy?

- **Hands-on approach** to the marine sciences
- **Individual research opportunities**
- **Waterfront setting** on the coast of Maine
- **Two choices** of majors
- **Reduced tuition. . .**

dependent upon state of legal residency and major

- **Teaching certification option**
- **Internship opportunities**
- **Cruise program**
- **Tropical Marine Science** field experience option
- **Dual major option in Small Vessel Operations**



Corning School Research

Corning School students have many opportunities to help faculty with research, and conduct independent research projects as well. Some student research topics include:

- “Effects of guided nature walks on the nesting behavior and hatching success of loggerhead turtles (*Caretta caretta*)”
- “Summertime vertical particle flux in the Penobscot River Estuary, Maine”
- “Winter activity of the green crab, *Carcinus maenas*”

Faculty research activity includes:

- “Phosphorus-particle associations in the Penobscot Estuary turbidity maximum”
- “Behavioral comparisons of two sympatric clownfish species as symbionts of the anemone *Heteractis crispa*”
- “Reproductive ecology and characterization of population genetic structure of *Fucus vesiculosus* Linnaeus in the northwestern Atlantic”
- “Nitrogen and carbon cycling in coastal marine environments and linkages to terrestrial systems”

Tropical Field Study

The Corning School’s tropical marine science class heads south to well-known marine laboratories in the Caribbean between semesters. Topics and field experiences in the course include fish behavior and biodiversity, coral reef biology, mangrove habitat surveys, jellyfish productivity, turtle grass bed communities, limestone caves, and hypersaline ponds.

Letters From the Field

“I started working on *R/V Friendship* my freshman year. It gave me a lot of extra experience and helped me with a lot of the skills that I want to base my career around.”
— Jesse Dalton, 2006

“Being able to collect different types of organisms right from the waterfront and examine them has to be the best part of Maine Maritime Academy.” — Danielle Dallis, 2007

“You get a world class education from MMA. I was able to travel to several different countries as part of my college program.”
— Robert Watts II, 2002

“I’m convinced that the strong points of my undergraduate experience were the well-rounded education, technical hands on experience and the availability of practical sea time. That’s what made us competitive in the job market.” — Jeremy Weirich, 1997

Faculty Notes

“The best part of teaching is helping students realize their potential. So often this takes place in lab or at sea where learning happens by doing, through trial and error, and by assuming responsibility.”

— **Dr. Joceline Boucher** specializes in estuarine chemistry. She is currently studying geological and chemical processes in Penobscot Bay.

“For me, being a research scientist without also being a teacher would be an incomplete occupation. Instructing, interacting with, and yes, even entertaining students is as much fun as working with fish. . . . and if I am teaching students about fish, well, it can’t get any better than that.”

— **Dr. Ann Cleveland** focuses her research on the physiology and ecology of coral reef fishes, and nutrient cycles in coral reef environments.

“Having taught at a university with class sizes of more than 300 students, the value of small class sizes here at MMA shouldn’t be discounted. The close interaction between students and teachers creates an environment that is friendlier to the student and facilitates learning.”

— **Dr. George Harakas** teaches general, organic, and engineering chemistry. His research focuses on industrial applications of inorganic chemistry.

“The emphasis on hands-on experiential education, the immediate access to a diversity of marine habitats, and the high degree of interaction between faculty and students make teaching at MMA challenging, rewarding, and a lot of fun.”

— **Dr. Jim McKenna** is interested in conservation and systems ecology of marine coastal ecosystems. His particular areas of study include anthropogenic influences on coastal nitrogen and carbon cycling.

“It has been a thrill to take students into the field and the laboratory to have hands-on experience with concepts that have been covered in lecture. The access to waterfront facilities as well as the research-grade equipment in our teaching laboratories allow students to learn many important scientific skills and techniques.”

— **Dr. Jessica F. Muhlin** specializes in marine botany and has research interests in the reproductive ecology and population genetics of rockweeds in the northwestern Atlantic.

“It is so satisfying, and fun, to work with students as they grow from participating in cruises to designing and running them.”

— **Dr. Lauren E. Sahl** works with her students on the oceanography of Penobscot Bay.

“All of my projects involve working closely with both graduate and undergraduate students in the laboratory and field environment.”

— **Dr. Alan Verde** investigates various aspects of the algal-cnidarian symbiosis, clownfish-anemone associations and metabolism in sea cucumbers.

Secondary Ed Certificate

Maine Maritime Academy, in a cooperative effort with the University of Maine, offers a Secondary Education Teaching Certificate to teach biological, environmental, and physical sciences at the high school level. For more information, contact: Dr. Lauren Sahl, Corning School of Ocean Studies, 207/326-2393, lauren.sahl@mma.edu

Career Choices

Professional careers in marine biology and marine science encompass a wide variety of jobs. Depending on your interests, you may find yourself working as a:

- **Laboratory Manager**
- **Hydrographer**
- **Research Assistant**
- **Environmental Consultant**
- **Fisheries Observer**
- **High School Science Teacher**
- **Naturalist**
- **Aquaculture Technician**
- **Aquarist**
- **Marine Technician**
- **Environmental Educator**
- **Oceanographer**

Setting MMA Apart

Compare Maine Maritime Academy to other marine science colleges and see what sets us apart from the rest.

- **Oceanfront location**
- **Advanced research equipment**
- **Research vessel on campus**
- **Navigation and seamanship training**
- **SCUBA certification available**
- **Modern aquaria and wet labs**
- **Small classes and lab sessions**
- **At-sea experience, research cruises**
- **Strong academic reputation**
- **Internship opportunities**
- **Professional job placement center**
- **Small, safe campus setting**
- **Regiment or independent lifestyle options**
- **Reasonable annual costs**
- **NROTC opportunities**

Learn More

Visit www.mainemaritime.edu - our web site is filled with helpful information that may assist you as you consider attendance more seriously. Visit oceans.mma.edu for specific information on the Corning School of Ocean Studies. Admissions counselors are always available to speak with you. Simply give us a call.

The Academy reserves the right to make changes in its rules, regulations, procedures, degree requirements, and fees. Our online catalog is regularly updated with contemporary information and should be referred to for complete programming facts. Please visit www.maine-maritime.edu

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