Endless Oceans: Marine Science 101

Curious about our oceans? Interested in expanding your knowledge while also expanding your network? We welcome you to explore the world of marine science through this engaging series of lessons and hands-on experiences hosted by Mote education professionals. Classes will also feature Mote experts discussing their research related to that day's topic and active learning excursions around Mote. Learning is a lifelong endeavor, continue your journey with Mote Marine Laboratory.

COURSE DETAILS

Ages: Adult participants, 18 years or older

Times: Mondays, 9:00 a.m. – 12:30 p.m. (8:30 a.m. - 12:30 p.m. with optional Coffee Connections)

Optional Activities:

- **Coffee Connections:** 8:30-9:00am. Come mingle with peers over complimentary morning coffee to discuss the assigned course readings, like interests and engage with your instructors!
- **Community Engagement Project:** This optional assignment is for students who are interested in diving further into the world of marine science. The project will be introduced on the first day of class and participants will present their projects by the end of the ten week course. **(Full-time Endless Oceans Participants Only)**

Cost:

- **One class**
  - $30 members
  - $35 non-members
- **Full Semester (10 classes)**
  - $225 for members
  - $275 for non-members

Contact: endlessoceans@mote.org or 941-388-4441 ext. 164

(dates, times, and class availability subject to change)

EXAMPLE SEMESTER COURSE OFFERINGS - SUBJECT TO CHANGE

Introduction to Marine Science 101 (Full semester students ONLY)

Description: This class is only for students registering for the full semester of Marine Science 101. We will introduce you to the format of Endless Oceans: Lifelong Learning and discuss key marine science concepts and terminology that will be seen throughout the course. Full-time students will also be offered the opportunity to engage in a self-driven research project throughout the semester and present their work after the final class. PLEASE NOTE: This class is only open to those registered for the entire semester.

Key topics: introduction to the course, salinity, density and other common marine science terms

Florida Coastal Habitats

Description: Explore Florida's coastal wetland and marine habitats, as well as their function and importance in the ecosystem. We will examine local environmental challenges our watersheds face as well as the research Mote is doing to understand these complex systems.

Key topics: Florida watersheds, the water cycle, tides, hardening coastlines, urban runoff

Florida Marine Invertebrates

Description: This lesson will focus on local marine invertebrates and their ecological importance. We will learn about some of Mote's invertebrate research and conduct a squid dissection during our Active Learning segment.

Key topics: food webs, echinoderms, cnidarians, mollusks, gastropods, crustaceans

Sea Turtle Ecology

Description: Students will learn basic sea turtle ecology and the 5 primary species found in Florida. We will look into the largest threats sea turtles currently face in our area and what Mote is doing to help these amazing creatures recover.

Key topics: sea turtle physiology, species identification, threats to sea turtles, sea turtle conservation efforts, related Mote research

Florida Marine Mammals

Description: This lesson centers on local marine mammal species with a heavy focus on dolphins and manatees. Students will learn basic marine mammal physiology, diet, ecological role and current conservation status. We will also discuss the Sarasota Dolphin Research program and Mote's Strandings Investigation Program.

Key Topics: bottlenose dolphins, Florida manatees, threats to marine mammals, conservation efforts

Florida Sharks and Rays

Description: This class explores elasmobranch anatomy and ecology, with a focus on local shark and ray species. Discussions will detail their ecological importance, diet, conservation status, current threats and ongoing Mote research.

Key topics: Florida elasmobranch species, elasmobranch physiology, shark conservation, trophic levels

Florida Fish Ecology

Description: Students will be introduced to marine bony fish ecology, detailing fish life cycle and ecological importance. We will investigate the current status of local and global fisheries and Mote's relevant research on this topic.

Key topics: bony fish physiology, fish life cycle, Florida fisheries, overfishing

Red Tide and Environmental Health

Description: This class breaks down the science behind red tide and phytoplankton. We will analyze environmental health in the area and identify local concerns that Mote is currently researching, such as pesticide impact on marine environments and local runoff pollution.

Key topics: phytoplankton, red tide, bioaccumulation, biomagnification, water pollution, urban runoff, the water cycle

Coral Reefs and Ocean Acidification

Description: Welcome to the wonderful world of corals! This class spotlights coral ecology and their important role in the environment. We will discuss the changes researchers are observing in corals around the world and the causes behind them. This lesson will feature Mote's research with coral resilience and restoration efforts in the Florida Keys.

Key topics: coral ecology, ocean acidification, coral bleaching, status of coral reefs around the world, climate change

Field Explorations

Description: In this final class we put everything we have learned into action and get out in the field! Using various field sampling techniques, we will explore some of the native flora and fauna of the estuaries surrounding City Island and do some water testing experiments. Find out what to wear and bring for this field-based class.

Key topics: field sampling, bay ecosystem