

Marine and Environmental Science

MATES

1 Year Program
(P.M. Class Only)

Mr. Jason Kelsey

This program will emphasize marine ecosystems, environmental issues, basic ecology, oceanography, conservation and natural resources. It addresses concerns for the environment and integrates the scientific principles of chemistry, biology, and earth science to understand interrelationships of the natural world.

Related Job Titles

Aquaculture Specialist
Water Quality Sampler
Environmental Engineer
Environmental Consultant

Marine Ecologist
Salvage Diver

Topic will include:

- Pine Barrens Ecology
- Estuarine Ecology
- Forestry
- Wildlife Management
- Population Dynamics
- Toxicology
- Energy

*****Various field and vessel trips will be conducted, including Barnegat Bay, County Parks, and New Jersey State Parks.*****

Worker Requirements

You should prefer:

- Working outdoors and in different weather conditions
- Working with technology, including the Internet, as a means to gather real time data

You should be able to:

- Use a computer (IBM) with graphics program
- Use water quality tests to determine multiple factors

Physically you must:

- Sample water in both fresh and salt water environments
- Use measuring instruments including pH, temperature, salinity, dissolved oxygen requirements, and other parameters
- Use the spectrophotometer to conduct further analysis of water samples

Career Ladder

Technical training leads to positions of Assistant Park Naturalists, Aquaculture Assistants or Water Quality Samplers. Further education is necessary for advancement to Naturalist, Aquaculturalist, Environmental Engineer, Consultant, and Laboratory Technician.

A four year bachelor's degree is a minimum requirement for Marine Resource Management, Marine Ecology and Environmental Education Specialist. Environmental Engineering, which includes Coastal Engineering, Marine Biology and Oceanography careers, may require a master's degree or higher. Proper certification is required for the engineering field, as well as skills needed in Marine Science. Jobs require good communication skills, critical thinking, and use of current technology.

Continuing Education

Junior college to a four year program in Natural Sciences and Marine Sciences. Workshops and short courses will be required as well.

Additional Information

The study of Marine and Environmental Science is competitive and requires work experience. The more diverse the experience, the better the opportunities during and after college. The fields are diverse and needs arise on a yearly basis in specialty areas. Marine fisheries have been on the decline the past thirty years leading to the need to raise fish in a controlled setting which has opened opportunities in the Aquaculture fields and Fisheries Management.