

# FRESHWATER AND MARINE SCIENCE, PH.D.

The Freshwater and Marine Sciences (FMS) Graduate Program offers curricula leading to the master of science and doctor of philosophy degrees or a doctoral minor in freshwater and marine sciences. Interdisciplinary in nature, each individualized program of study provides graduate training in aquatic sciences and integrates related sciences. Students enrolled in the program are advised by faculty in several departments in the College of Letters & Science, the College of Engineering, the College of Agricultural and Life Sciences, and the School of Veterinary Medicine.

UW–Madison is recognized worldwide as a leader in the field of limnology and aquatic ecology. The FMS Program began in 1962 as the oceanography and limnology program. The program combines research and teaching from several fields and departments to develop a greater understanding of aquatic systems—their origins, inhabitants, phenomena, and impact on human life.

The FMS Program emphasizes limnological studies and is based on the premise that limnology and marine sciences are integrated fields requiring a broad base in the fundamental disciplines. Students may specialize in limnology or in marine sciences, or they may focus on processes common to both environments.

Study plans are individually tailored for each student by a guidance and evaluation committee composed of at least five faculty members including the major professor. The committee guides the student in developing study plans, research, and career goals.

All Ph.D. candidates are expected to obtain a broad background in aquatic sciences and depth in their research area. The background may include biology, chemistry, data science, geology, physics, or other related fields. The major, by nature of the program, includes advanced courses in several subdisciplines in freshwater and marine sciences. The minor may be used to obtain tools of research, focus in greater depth on a single discipline within freshwater and marine sciences, or open additional areas related to the field, such as the social sciences.

## FACILITIES

Facilities for freshwater and marine research and instruction in the biological, chemical, and physical areas of limnology and marine sciences are available at UW–Madison through the Center for Limnology, the Water Science & Engineering Laboratory, and the departments of faculty participating in the program. The Center for Limnology also maintains a year-round laboratory at Trout Lake. This facility is a well-equipped biological field station in the Northern Highlands lake district of Wisconsin. Several research vessels are available for research on the Great Lakes. Ships belonging to other institutions are used for oceanographic field research.