The Department of Biological Sciences at USM

Research Opportunities
(see https://cms.usm.maine.edu/bio/research for more details)

The Biology Dept offers research opportunities to undergraduate, Masters, and high school students through direct work with our tenure-track faculty and adjunct faculty members. All 10 faculty in the Department carry out research programs that include student researchers, collaborations with colleagues at USM, throughout the State of Maine, and at other institutions in the United States. Our faculty publish peer-reviewed articles (many with students as coauthors), present at professional meetings, review proposals and manuscripts, and many have obtained external funding for their research.

Biology Dept Faculty:
David Champlin studies the hormonal control of development, steroid control of insect visual system metamorphosis, cell cycle control, and transcription regulation.
Douglas Currie is a neuroscientist who investigates development and toxicological effects on the mammalian brain.
Louis Gainey studies cell signaling and neural control of smooth muscle and cilia in bivalve mollusk gills.
Christine Maher studies the evolution of social behavior in mammals with a current emphasis on woodchucks.
Michael Mazurkiewicz studies the ecology of estuarine and tidal marsh invertebrates and the reproductive biology of benthic marine invertebrates.
Lisa Moore investigates the physiological ecology of marine microbial phytoplankton, focusing on environmental factors that control growth and influence population composition and dynamics.
Theresa Theodose studies plant community ecology and plant-nutrient interactions in stressful environments, with a current emphasis on salt marshes.
Jeffrey Walker investigates the mechanics of swimming and flying and the evolution of locomotor morphology in order to model the constraints on phenotypic evolution.
Kenneth Weber studies evolutionary genetics, including the genetic control of organic shapes, and excels in the experimental observation of the operation of natural selection.

Adjunct Faculty
S. Monroe Duboise, USM Dept of Applied Medical Sciences, Environmental microbiology and virology
David Evers, BioDiversity Research Institute, Environmental toxicology
David E. Harris, USM School of Nursing, Cardiovascular disease
Ira A. Levine, USM Lewiston-Auburn College, Algal physiological ecology and aquaculture
Ah-Kau Ng, USM Dept of Applied Medical Sciences, Immunology, cancer and nanotechnology
Jim Paruk, BioDiversity Research Institute, Loon mortality and reproduction
Iain Stenhouse, BioDiversity Research Institute, Pelagic seabird ecology
Karen A. Wilson, USM Dept of Environmental Science, Freshwater-marine linkages and salt-marsh restoration
John P. Wise, Sr. USM Dept of Applied Medical Sciences, Human and marine toxicology

What have our students done after graduation?
Students also get strong hands-on experience by taking at least 4-6 lab classes, and many students get enhanced practical experience through research positions (volunteer, work study, grant funded, and fellowships) in science research labs at USM and elsewhere. Alumni from the B.S. program have continued their education in professional schools and in graduate school, and have gone on to work as lab technicians, research biologists, and state biologists.

Here are some of the institutions that our students graduating since 2003 have attended:
- University College of Dublin (medical school)
- University of New England College of Osteopathic Medicine
- Maine Medical Center – Tufts University School of Medicine
- University of Rhode Island College of Pharmacy
- Albany College of Pharmacy
- New York Chiropractic College
- Brandeis University (PhD)
- Colorado State University (PhD)
- Northeastern University (PhD)
- Oregon Health Sciences University (PhD)
- Pennsylvania State University (PhD)
- University of Maine (PhD)
- University of Massachusetts (PhD)
- University of Michigan (PhD)
- University of New Hampshire (PhD)
- University of Oregon (PhD)
- University of Rhode Island (MS)
- University of Southern Maine (MS)
- University of Washington (PhD)

Here are some of the employers that have hired our BS graduates since 2003:
- Idexx Laboratories
- Alere Scarborough
- Animal Emergency Clinic
- Standish Veterinary Hospital
- Always Green
- Dia Med, Inc.
- ImmuCell
- Nordx
- Katahdin Analytical Services
- Poland Spring
- Tom’s of Maine
- Corning, Kennebunk
- Maine Dept. of Inland Fisheries & Wildlife