

Molecular Environmental Biology Career Snapshot

Molecular Environmental Biology (MEB) focuses on biological organisms along a vertical span, from the molecular level up through the cellular, organismal, and ecological levels. The breadth of this biological science program provides a valuable perspective for students who have a passion for biology and are interested in the application of biological principles to learn how organisms function in their environment. A classic pre-medical or pre-health science major, the discipline offers an array of six areas of concentration within biology: animal health and behavior; ecology; insect biology; microbiology; environmental and human health; and biodiversity. Offered by the Department of Environmental Science, Policy, and Management (ESPM): <http://espm.berkeley.edu>

Key Skills

- Gain the ability to apply molecular skills and other technical approaches to real-world challenges in environmental problem solving.
- Develop critical and analytical thinking through the exposure and synthesis of biological knowledge from courses and lab work.
- Learn various sampling and species identification techniques to collect data. Acquire proficiency in database development and management.
- Obtain research experience to practice scientific approaches and methods. Work with a faculty mentor while participating in an undergraduate research program or designing your own research project. Share your research results, or work in progress, in the form of a paper, report, research poster, or public presentation.
- Strengthen your communication skills, both written and verbal, to prepare for independent research work or team projects.

Career Pathways

Our graduates acquire a sound understanding of biological principles from the molecular through the ecological levels, which gives them especially valuable scientific training given that molecular approaches are expected to play an increasing role in environmental problem solving. The Molecular Environmental Biology degree prepares students well for graduate education in a biological area, or for careers related to biology and the environment, such as scientific research in government, industry, or academia, or biological assessment for various governmental agencies or environmental consulting firms. Graduates can also pursue a range of careers extending beyond the field of biology, such as human or veterinary medicine, other health professions, environmental or science education, or non-technical work in writing, illustration, photography, sales, or legislation.

Public and Non-Profit Sector Jobs

- **Health or inspection agencies:** Work in federal, state, or local agencies, public health laboratories, or with control boards, to manage programs aimed at improving health and preventing disease.
- **Various governmental agencies:** With a background in biological sciences, mathematics, and computer technology, conduct research in government laboratories, such as the Departments of Agriculture or Interior, Fish and Wildlife Service, or National Institutes of Health. Develop, advise on, or lobby for policy or legislation that ensures public health and safety.
- **Teaching and research:** Teach the biological or environmental sciences in educational institutions, especially colleges of agriculture and veterinary medicine. Conduct field or laboratory research in the biological sciences for colleges and universities, agricultural experiment stations, or national and international environmental research programs.
- **Non-profit organizations, museums, and public parks:** Work with wildlife preserves and parks, zoos, aquariums, science museums, botanical gardens and arboretums, or organizations involved in conservation or ecological sustainability, for various purposes including teaching, biological control, biological survey, taxonomy, animal care, or environmental training.

Private Sector Jobs

- **Health industry:** Pursue a career as a health professional in medicine, nursing, pharmacy, physical therapy, dentistry, optometry, and other similar fields. Conduct research and development on animals, plants, or humans, or manage the production and sales of human or animal pharmaceuticals.
- **Biotechnology firms:** Conduct laboratory testing and other research for the agricultural industry, including fertilizer manufacturers and animal or plant breeders and producers.
- **Media:** Work for media outlets, such as scientific magazines, professional journals, textbooks, or publishing companies, as a technical writer, editor, medical illustrator, or wildlife photographer.
- **Inspection organizations:** Research and monitor the condition of food producers and processors. Work for chemical or pest control companies testing chemicals, lumber, pulp, or other products for general safety and effectiveness.

Recent Alumni: Where Are They Now?

Courtesy of the UC Berkeley Career Center: <http://career.berkeley.edu/Major/major.stm>

Bayer, Research Associate
California Department of Health Services, Program Technician
CAL-PEP, Research Assistant
Carnegie Institution, Curator Assistant
Childrens Hospital Oakland, Staff Research Associate
City of Hope National Medical Center, Research Assistant
Eli Lilly & Company, Pharmaceutical Sales Representative
Emory University Pathology Department, Research Assistant
Genentech, Bioprocess Technician
Mercer Human Resource Consulting, Analyst
Merrill Lynch, Financial Advisor
NASA, Content Developer
Restoration Consultants, Environmental Consultant

Tiburcio Vasquez Health Center Inc, HIV Health Educator
U.S. Department of Agriculture, Biological Lab Technician
University of Alaska, Fairbanks, Research Assistant
University of California, Berkeley, Health Educator
White Pacific Securities Inc, Marketing Assistant
Xuma, Technical Support Specialist

Biological Sciences, Masters, University of California, Santa Barbara
Botany, PhD, University of California, Davis
Entomology, PhD, University of California, Riverside
Medical Sciences, MD, Medical College of Wisconsin
Plant Sciences, PhD, University of California, Berkeley
Public Health, Masters, University of Michigan, Ann Arbor
Veterinary Medicine, DVM, Foreign University

Internship & Career Resources

- **CNR Newslines:** The College of Natural Resources Newslines is a moderated listserv that will keep you in the loop about research opportunities, internships, job opportunities, and more. To subscribe to *CNR Newslines*, send an email from your primary email account to majordomo@listlink.berkeley.edu. Leave the subject heading blank. In the body of the message, type the following command: **subscribe cnr_newsline**
- **CareerMail:** These Career Center mailing lists target specific career fields and topics, so you can choose whichever ones are ideal for you.
<http://career.berkeley.edu/MailList/MailList.asp>
- **What Can I Do With a Major In...Molecular Environmental Biology?**
<http://career.berkeley.edu/Major/MolEnvBio.stm>
- **CalJobs:** Search this comprehensive database for full-time, part-time, internship, and summer jobs, both on and off campus.
<http://career.berkeley.edu/Jobs/CalJobs.stm>
- **UC Berkeley Career Center**
<http://career.berkeley.edu>