# UC Davis Biological Sciences Graduate Programs



## Advanced degrees to prepare scientific leaders for success

#### Real, Life, Research.

UC Davis ranks among the nation's top institutions dedicated to the study of life sciences. Biological sciences graduate programs span colleges and schools across campus, offering a multidisciplinary and collaborative approach to education and providing options to tailor your curriculum to meet research interests. With world-class faculty and advanced research facilities, you'll be well-prepared for a successful career.

#### **Animal Behavior**

The Animal Behavior program (Ph.D.) explores adaptive and evolutionary aspects of animal behavior. Program members take many theoretical and methodological approaches, employing a wide range of animal species in their research.

Students will receive training for instruction and research in areas relating to many disciplines, including anthropology, animal science, conservation biology, ecology, entomology, neurobiology, psychology, physiology, veterinary science, wildlife biology and zoology.

### Biochemistry, Molecular, Cellular and Developmental Biology

The BMCDB program (Ph.D.) comprises students and faculty who share an interest in studying fundamental biological problems at the molecular, cellular and organismal levels. Experimental approaches range from the atomic and ultrastructural levels to model organisms from yeast to mammals.

A graduate researcher examines a microscope slide of avian brain tissue.

Research interests reflect traditional strengths in biochemistry, molecular biology, and cell and developmental biology as well as approaches that combine biology, genetics, genomics, physics, engineering, math and computational disciplines. Students are encouraged to explore focus areas through core courses and four first-year rotations.

#### **Biophysics**

The Biophysics program (Ph.D.) prepares students to conduct independent research at the interface of physics, chemistry and biology. Students will develop and employ advanced research methods, using state-of-the-art tools to measure physicochemical phenomena in biological systems.

Research areas of emphasis include structural biology, nanoscale engineering, molecular dynamics, macromolecular organization and computational and theoretical biology. The program is designed to ensure students' dialogue with Biophysics faculty members through seminars, specific courses and rotations.

#### **Integrative Genetics and Genomics**

The IGG program (Ph.D. and M.S.) provides students with solid training in many disciplines of modern genetics and participation in both foundational and applied research in genetics and genomics across all domains of life.

IGG offers unique opportunities for research in genomics, computational biology and classic, molecular and evolutionary genetics relevant to microbial, plant, animal and human populations.



#### Molecular, Cellular and Integrative **Physiology**

The MCIP program (Ph.D. and M.S.) develops a strong foundation in the multi-level functions of living organisms and offers opportunities for joint Ph.D./M.D. and Ph.D./D.V.M. programs.

Research interests include general areas of cellular, molecular and systemic physiology as well as specialization in cardiovascular physiology, comparative physiology, endocrinology, exercise physiology, neurophysiology, reproductive physiology and the physiology of domestic animals.

#### **Neuroscience**

is the Center for Neuroscience.

The Neuroscience program (Ph.D.) offers interdisciplinary training for students in all areas of neuroscience, from molecules to cognition. Students will receive exposure to a myriad of clinical problems that challenge brain health.

Areas of focus include brain development and aging, synaptic function and plasticity, sensory processing and motor systems, learning and memory, computational neuroscience and diseases. The focal point for research on campus



The Plant Biology program (Ph.D. and M.S.) grows an understanding

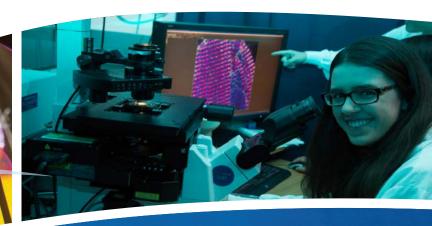
of foundational and applied plant knowledge and research, ranging from individual molecules to entire populations.

Research specialization areas include cell and developmental biology, environmental and integrative biology, molecular biology, biochemistry and genomics, and systematics and evolutionary biology.

#### **Population Biology**

The Population Biology program (Ph.D.) operates at the interface between ecology and evolutionary biology.

Research interests explore population growth, structure and dynamics, population interactions, community ecology, food webs, biogeography, behavioral and physiological ecology, life history strategies, systematics, evolution, population and quantitative genetics, and genomics.



"The most valuable part of my graduate program experience was the diversity of the education and research opportunities. I learned to be independent and how to design experiments to make great discoveries myself."

## Supporting your success, from start to finish

UC Davis supports graduate students with academic advisement from faculty and staff advisors as well as financial support through fellowships, student employment, supplemental tuition programs and more.

Through world-class professional development programs, we provide unparalleled opportunities for student research and career development, formal training and targeted networking event series.



College of Biological Sciences Graduate Academic Programs

530-752-9092 gap@ucdavis.edu biology.ucdavis.edu/grad

## HAVE QUESTIONS? CONTACT A STAFF ADVISOR TO LEARN MORE

#### **Research beyond limits**

At UC Davis, multidisciplinary collaboration helps guide focused research. Among the hundreds of biological research labs on campus, your graduate experience will benefit from access to many institutional resources and facilities, including:

Agricultural Experiment Station
Alzheimer's Disease Center
Biotechnology Program
Bodega Marine Laboratory
Botanical Conservatory

California National Primate Research Center Center for Aquatic Biology and Aquaculture Center for Plant Diversity

Light Microscopy Imaging Facility Lattice Light-Sheet Microscope

Center for Neuroscience

Center for Molecular and Genomic Imaging

Center for Population Biology

Coastal and Marine Sciences Institute

College of Agricultural and Environmental Sciences

College of Biological Sciences

College of Engineering

College of Letters and Science

Comprehensive Cancer Center

Controlled Environmental Facility

Genome Center

John Muir Institute of the Environment

Institute for Regenerative Cures

Information Center for the Environment

Light Microscopy Imaging Facility

Natural Reserve System

School of Medicine

School of Veterinary Medicine

Tahoe Environmental Research Center

**UC Davis Medical Center** 

UC Davis MIND Institute

