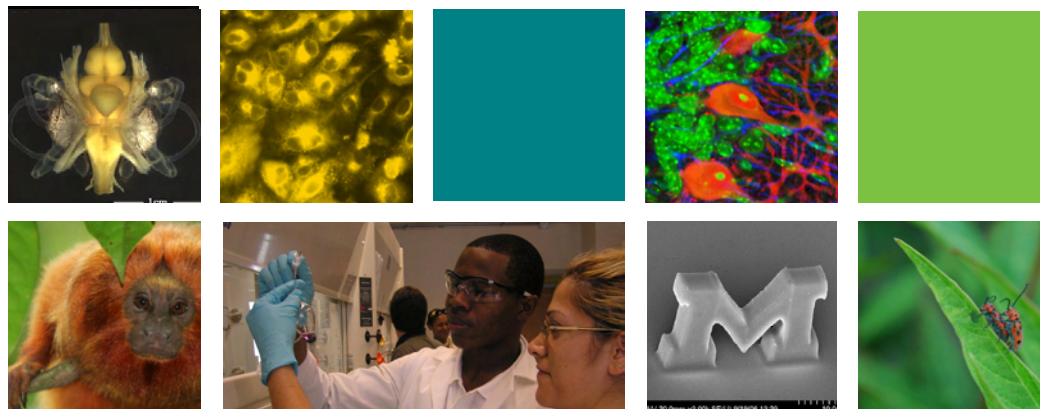
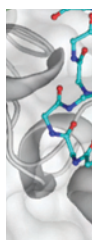


COLLEGE OF CHEMICAL & LIFE SCIENCES



GRADUATE DEGREE PROGRAMS



College of Chemical and Life Sciences

2300B Symons Hall

301.405.2071

www.chemlife.umd.edu



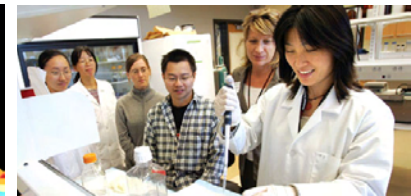
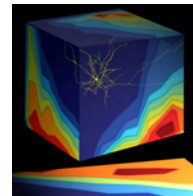
THE UNIVERSITY OF MARYLAND COLLEGE OF CHEMICAL AND LIFE SCIENCES OFFERS GRADUATE RESEARCH OPPORTUNITIES IN A DIVERSE RANGE OF SUBJECTS, with an emphasis in five dynamic areas of modern science, including: ecological sustainability, genomics, host-pathogen interactions, nanoscience and biomaterials, and sensory neuroscience.

Students are supported through research assistantships, teaching assistantships, or training grants. The University of Maryland's strategic location in the Washington, DC metropolitan region ensures that students are exposed to a broad range of educational, cultural, and recreational experiences. Nearby research institutes and laboratories, including the National Institutes of Health, the Food and Drug Administration, the National Institute of Standards and Technology, the Smithsonian Institution, and the USDA Beltsville Agricultural Research Service, provide unparalleled opportunities for collaborative research in cutting-edge fields.

Our graduate students are poised to enter successful careers in academia, the corporate sector, state and federal agencies, among other venues, at the completion of their program. We invite you to explore our graduate programs, listed alphabetically, and visit the program websites for more detailed information.

THE COLLEGE AT A GLANCE

125	tenure-track faculty
110	instructors, lecturers, and postdoctoral scientists
29	million dollars in research funding (FY '07)
700	graduate students
4	departments – <i>Biology, Cell Biology & Molecular Genetics, Chemistry/Biochemistry, Entomology</i>
10	interdisciplinary PhD programs



THE BEHAVIOR, ECOLOGY, EVOLUTION AND SYSTEMATICS PROGRAM (BEES) is an

interdepartmental PhD program emphasizing fundamental and applied research in the areas of behavior, ecology, evolution, systematics, and related disciplines. Participating faculty members come from the departments of Animal and Avian Sciences, Anthropology, Biology, Environmental Science and Technology, Cell Biology and Molecular Genetics, Computer Sciences, Entomology, Geology, Geography, Plant Science and Landscape

Architecture, Philosophy, and Psychology. Adjunct Faculty from the Smithsonian Institution, USDA, the National Cancer Institute, and the University of Maryland Biotechnology Institute (UMBI), among others, also contribute to this highly collaborative and integrative program. www.bees.umd.edu

THE BIOLOGY GRADUATE DEGREE PROGRAMS, both Master's and PhD, emphasize individualized programs tailored to meet graduate students' research interests and career goals. There are no fixed core courses and lab rotations are optional. An advisory committee helps guide the students from the beginning to graduation. The department's major areas of research are: Animal Behavior, Apoptosis, Conservation Biology, Comparative and Functional Genomics,



Ecological Sustainability, Ecology, Evolution, Evolution of Development, Membrane Biophysics, Neuroscience, and Sensory Neuroscience.

www.chemlife.umd.edu/biology

THE DEPARTMENT OF CELL BIOLOGY AND MOLECULAR GENETICS (CBMG)

offers graduate training leading to the MS or PhD degrees. Five specializations are available: Genetics and Genomics; Microbiology, Microbial Pathogenesis, and Immunology; Cell and Developmental Biology; Virology; and Plant Biology. The department has several state-of-the-art shared instrumentation laboratories, including the Advanced Genomics Facility, Biological Imaging and Cell Sorting Facility, Proteomics and Mass Spectroscopy Facility, and the Scientific Computing Facility. Several faculty members participate in the Maryland Pathogen Research

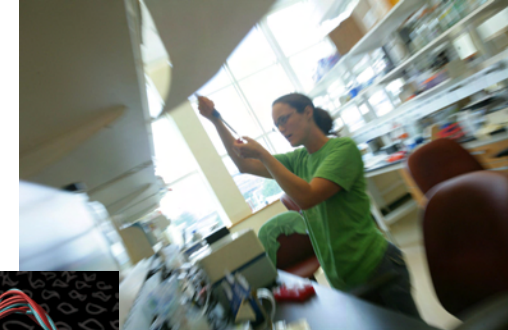
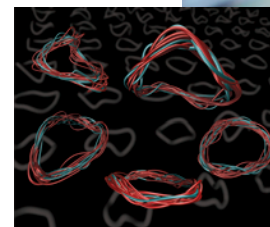


Institute, an interdisciplinary research initiative working to develop new ways to detect pathogens in the environment and to prevent and cure global infectious diseases.

Students can also choose to work with adjunct and affiliate members of the department which include several faculty from other university departments and nearby institutions including the National Institutes of Health, United States Department of Agriculture, University of Maryland Biotechnology Institute, and VA-MD Regional College of Veterinary Medicine. www.cbmg.umd.edu

THE DEPARTMENT OF CHEMISTRY & BIOCHEMISTRY offers graduate study and research that lead to a PhD degree in Chemistry or Biochemistry. Fields of specialization range from the classical subdivisions of chemistry and biochemistry, to emerging subfields such as supramolecular chemistry, nanoscience, and bioanalytical chemistry. With 46 active faculty members, competitive stipends for graduate researchers, strong ties to interdisciplinary research initiatives on campus, and collaborative research partnerships with nearby federal laboratories such as the National Institutes of Health, National Institute of Standards & Technology, and the Food and Drug Administration, the department offers a dynamic environment to conduct research and earn a graduate degree.

www.chem.umd.edu



THE CHEMICAL PHYSICS PROGRAM offers MS and PhD degrees in chemical physics, which form the academic foundation for an

expanding range of professional careers that require knowledge of both physics and chemistry. The program is intended for students with undergraduate degrees in chemistry or physics as well as students with majors in mathematics or engineering and strong backgrounds in chemistry or physics. Participating faculty come from the Institute for Physical Science and Technology, the Departments of Chemistry and Biochemistry, Meteorology, Physics, Chemical, Electrical, Mechanical, Materials and Nuclear Engineering as well as the Institute for Research in Electronics and Applied Physics (IREAP).

www.chemicalphysics.umd.edu



THE DEPARTMENT OF ENTOMOLOGY

has an internationally recognized graduate program, offering both MS and PhD degrees. The department is actively involved in research, teaching and extension activities focusing on insects and their relatives, as well as sub-disciplines including ecology, ecosystem ecology, aquatic biology, molecular and developmental biology, genetics, biological control of insects and weeds, systematics, evolutionary biology, integrated pest management, toxicology, and insect pathology. www.entomology.umd.edu

THE MARINE-ESTUARINE-ENVIRONMENTAL SCIENCES (MEES)

graduate program offers MS and PhD degrees relating to restoration ecology, aquaculture, fisheries management, oceanography, marine biotechnology, toxicology, environmental chemistry, remote sensing, and landscape ecology. The interdisciplinary MEES program is taught by faculty throughout the University System of Maryland (USM) and collaborates with research organizations



including NASA, the Smithsonian, NOAA, and the National Zoo. www.mees.umd.edu

THE MOLECULAR AND CELL BIOLOGY PROGRAM (MOCB)

offers study leading to the PhD degree in diverse areas of modern biology including molecular genetics, cell biology, developmental biology, immunobiology, virology, biochemistry, and plant sciences, among others. This interdisciplinary program offers training through the College's four departments, in departments within the College of Agriculture and Natural Resources, as well as in affiliated units of the University of Maryland Biotechnology Institutes, and select laboratories at the National Institutes of Health. Laboratories and core equipment housed throughout the participating units offer students extensive facilities for conducting state-of-the-art research in almost all aspects of cell and molecular

biology. The program combines a stringent core curriculum with an individualized and highly mentored research program that includes rotations in the first year, a strong advisory system and active interaction between students and research mentors. www.mocb.umd.edu

THE PROGRAM IN NEUROSCIENCE AND COGNITIVE SCIENCE (NACS)

offers research and training leading to the PhD degree in the areas of neuroscience, cognitive neuroscience, and computational neuroscience. Internationally-renowned faculty lead research programs in vision, audition, sensorimotor integration, synaptic plasticity, language and communication, learning, memory and decision-making, and neuromorphic engineering. These research programs are housed in over 14 different UM departments.

Through partnerships with the National Institutes of Health and the Children's National Medical Center, NACS graduate students may also receive research training in laboratories of adjunct faculty at neighboring institutions.

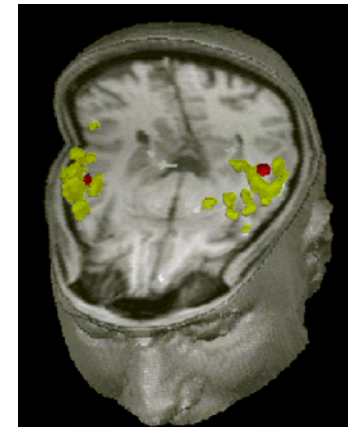
www.nacs.umd.edu



THE SUSTAINABLE DEVELOPMENT & CONSERVATION BIOLOGY

(CONS) master's program provides the multidisciplinary, conceptual and experiential training required to prepare students for leadership in conservation biology and development programs that are confronting the global biodiversity crisis. Participating faculty come from the College of Chemical and Life Sciences,

the College of Agriculture and Natural Resources, and the School of Public Affairs, and courses explore issues at the intersection of biological conservation, economic development, and public policy. Students also have the option to earn a Certificate in Ecological Economics, pursue a dual degree program with the Master in Public



Policy degree (with a specialization in Environmental Policy), or apply to the Peace Corps Master's International program, through which they will earn their master's degree and serve as a Peace Corps volunteer.

www.chemlife.umd.edu/cons

