MORAVIAN COLLEGE

DEPARTMENT OF BIOLOGICAL SCIENCES

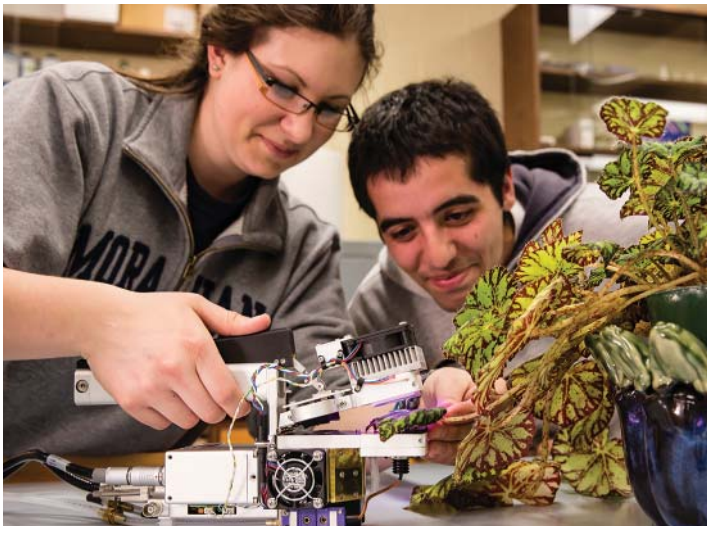
An overview of the department and its offerings. For further information, visit the website at www.moravian.edu/biosci.

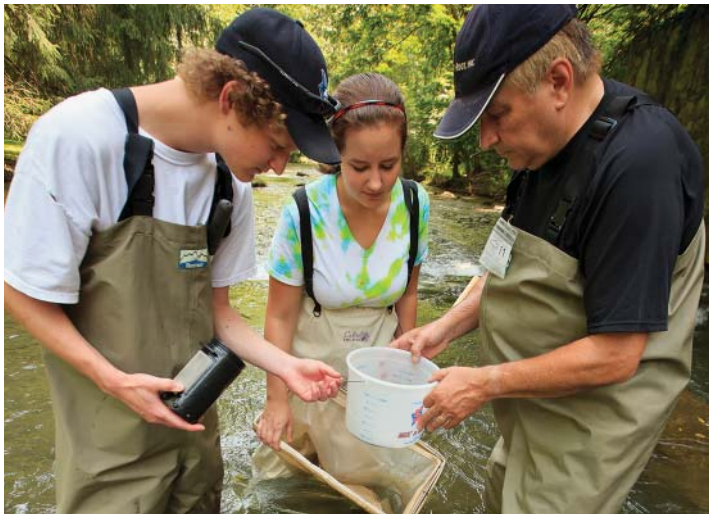
The mission of the Department of Biological Sciences is to instill in the students an understanding and appreciation of the common thread that connects modern biological study at all levels, from molecules to ecosystems. The faculty strives to actively engage students in the process of scientific investigation, develop their spirit of inquiry, strengthen their ability to explore both in the field and the laboratory, hone their analytical skills, and foster their capacity to communicate effectively with professional peers and the public. By helping students become independent thinkers and intellectually vibrant individuals, we help them to achieve a lifetime of personal and professional success and service to society.

Strong, Personalized Academic Majors

Moravian's biology program offers breadth, depth, hands-on-learning opportunities, and close mentoring between faculty and students. It emphasizes the importance, and some mastery, of all aspects of modern biology. The curriculum includes both a common core and the options to accommodate a wide range of individual student interests, offering a depth which ensures that our graduates are well-prepared to move from Moravian directly into challenging work in industry, education, or post-baccalaureate programs.

The program educates our students in many areas of the life sciences. We don't simply focus on the molecular and genetic aspects; we also expect our students to consider organismal and taxonomic relationships and the opportunities that exist to situate that information in the context of ecosystem relationships and global environmental issues.

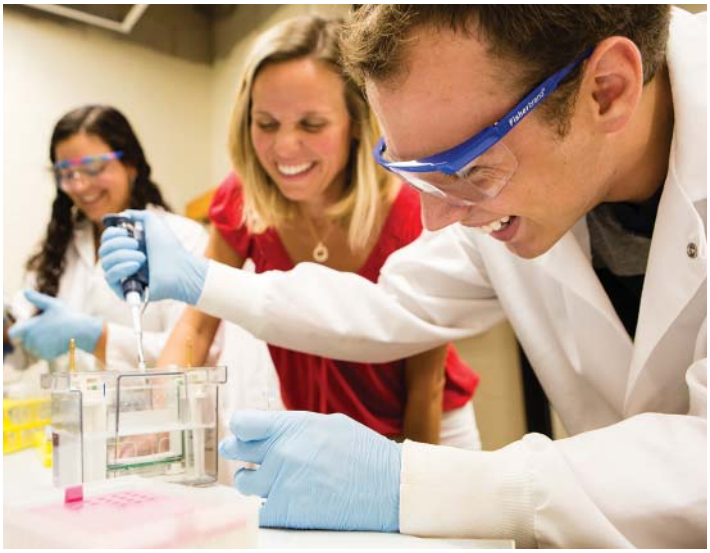




The biology program also has close connections with interdisciplinary majors—environmental studies and science, biochemistry, and neuroscience. Our majors take co-requisites in other departments such as chemistry, math, and physics, and by so doing, form a supportive community with students throughout the sciences. This helps students better understand the interconnectedness of the fields and the broader applications of the information and skills they are learning.

Biology majors use current methodological approaches in laboratories, learn about the intricacies of the subject in class, and discuss recent research findings in seminars. The program has a strong focus on writing and other forms of communicating science to a range of audiences. Students' computer literacy is similarly strengthened through the major program, with students gaining experience with the same computer applications used by scientific professionals in research labs around the world.

The faculty have expertise in many areas of modern biology, enabling effective mentoring in the classroom, laboratory, and through field experiences. Faculty are supportive and extremely involved in students' work.



They bring their love of all aspects of the life sciences to their classes and laboratories, and engage in a range of forms of pedagogy across the life sciences and the College. Since the senior Honors program began in 1960, the Department of Biological Sciences has had more than 100 students graduate with Honors—more than any other department.

Hands-On Learning

Students are encouraged to conduct independent studies and Honors research projects—all of which are inquiry or research-based, aligning with the recommendations of major national science organizations. Internships are available at off-campus sites, such as veterinary clinics, physical therapy centers, zoos, hospitals, sustainability organizations, nature centers and conservation organizations.

The undergraduate research opportunities give students additional practice in designing, writing, and presenting scientific research, in addition to their hands-on experiences in classes. The program also gives students the opportunity to present their research at regional, national, and international conferences. This hands-on emphasis is vital for training future scientists, health professionals, and educators as it helps them build confidence and gives them a more realistic view of their future careers. In addition, there is strong support for students who engage in extra- or co-curricular activities that expand their experiences, including service learning, intercollegiate athletics, campus music and art programs, and more.

Alumni Careers in the Biological Sciences

Graduates have found success in a wide range of positions including post-graduate programs (medical and veterinary school, allied health programs, and life science graduate schools), teaching, and jobs in pharmaceutical companies or other regional industries or research institutions.

- Chrissy Rocco '13 (biology) is in the physical therapy program at the University of Medicine and Dentistry of New Jersey.
- Zachary LaBar '12 (biology) is a biology teacher at Emmaus High School.
- Thea Kennerknecht '09 (biology) is a medical editor/writer in New York.
- Todd Johnson '09 (biology) received a master's degree in entomology at the University of Wisconsin, and is now pursuing a Ph.D. at the University of Illinois.
- Yi Li '08 (biochemistry) is in a biochemistry Ph.D. program at Purdue University. She recently had a paper in the premier journal *Science* describing a novel metabolic pathway in plants that she helped to discover.
- Rianne Stowell '13 (neuroscience), a Fulbright scholar, is in the doctoral program in neuroscience at the University of Rochester.
- Ian Guldner '12 (biology) is studying for a Ph.D. in cell and molecular biology at the University of Notre Dame.
- Amanda deVillers '09 (biology) is pursuing a master's degree in marine biology at the University of Guam. She is a biological science technician at the War in the Pacific National Historical Park in Guam.
- John Reese '11 (biology) is pursuing a master's degree in ecology at the University of Tennessee, Knoxville, studying diversification of early angiosperms.
- John Loughney '05 (biology) is a biochemist in the clinical development laboratory at Merck & Co. Inc.
- Scott Shelbo '07 (biology) is a sales representative for Eli Lilly & Company in Washington, D.C.
- Chiu Cheng '09 (environmental science) is currently pursuing a master's degree in oceanography at Florida State University.
- Victoria Thomas '13 (environmental policy and economics) works in Northeast Fishery at-sea monitoring for MRAG Americas in Essex, Mass.