

VIRGINIA WESLEYAN UNIVERSITY

JOAN P. BROCK SCHOOL OF MATHEMATICS AND NATURAL SCIENCES

Biology is the study of life and how biological processes affect our daily lives. Topics of study will include biodiversity, genetic engineering, problems associated with the expanding human population, the origin and diversity of life, functional morphology, ecology, and Darwinian evolution.

THE PROGRAM

The biology department offers a diversified program that examines the life sciences by integrating multiple disciplines, including the molecular nature of cellular structure and physiology, the evolutionary mechanisms of biodiversity, and the study of plant and animal communities in relationship to the environment. In addition to mastering concepts, students learn to see the biological sciences as a process of discovery in the classroom, laboratory, and through field work.

THE MAJOR

Students majoring in biology may choose to earn a Bachelor of Science or Bachelor of Arts degree. Each degree is designed to prepare students for advanced study in the health sciences and for biological research. The curriculum is designed to promote discovery and problem solving through scientific methodology, with most courses featuring an integrated laboratory component. Classroom and lab studies are augmented with the completion of a mandatory experiential learning opportunity such as undertaking undergraduate research, completing an internship, studying abroad in the natural sciences, or enrolling in a field course at a biological or marine field station. A student pursuing a B.A. in biology at Virginia Wesleyan is required to complete 48 hours of study in specified coursework, and 64 hours if choosing to pursue the B.S. degree.

THE COURSES

Classes at VWU are small and interactive. The biology department boasts fulltime faculty members who instruct labs and get to know the students from the moment they walk into the classroom. Special topics include the Natural and Social History of the Chesapeake Bay, Oceanography,

Tropical Ecology, Molecular Cloning Techniques and hands-on training with the Scanning Electron Microscope and the Confocal Laser Fluorescence Microscope housed in the Greer Environmental Sciences Center.

INTERNSHIPS/UNDERGRADUATE RESEARCH

Biology students are offered the opportunity to conduct original scientific research in an area of interest. They work closely with one or more members of the natural science faculty to develop and conduct a research project, then present their findings orally during the semester's undergraduate research symposium and as a formal research paper. Students are encouraged to present their findings at a conference. Biology students will coordinate internship placement with their supervising faculty member in their junior or senior year. Internships are an intensive study of a specific field of science through an on-site field experience with hands-on learning opportunities that are relevant to the chosen site. Internship organizations in the Hampton Roads area such as the Virginia Aquarium and Marine Science Center and the Virginia Zoological Park are available to students.

BEYOND THE CLASSROOM

Virginia Wesleyan graduates who earn a degree in biology are making a difference in the world. Their personalized experience has earned many graduates research grants, national recognition, and the ability to work independently in their research endeavors. Successful completion of the program will enable motivated students to pursue successful careers as physicians, nurses, veterinarians, biologists, environmental researchers, policy-makers, public health professionals, scientific journalists, and educators.

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