

## 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 include the origin and diversity of life, ecology, human interactions with the environment, Darwinian evolution, genetic engineering and molecular biology.*

**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 and some that include a study away opportunity. Classroom and lab studies are augmented with the completion of an undergraduate research project or completing an internship. A student pursuing a B.A. in biology at Virginia Wesleyan is required to complete 48 hours of study in specified coursework while 64 hours is required if pursuing the B.S. degree.

**THE COURSES**

Classes at VWU are small and interactive. The biology department boasts fulltime faculty members who instruct introductory and upper level courses and get to know the students from the moment they walk into the classroom. While we require students to complete a set of core classes to ensure expertise across the field of biology, a number of special topics courses are offered to allow students to explore more specialized topics.

These include Tropical Ecology, the Natural and Social History of the Chesapeake Bay, Oceanography and Conservation Biology. We also offer courses that provide hands-on training in Molecular Biology as well as using the Scanning Electron Microscope and the Confocal Laser Fluorescence Microscope, both housed in the Greer Environmental Sciences Center.

**INTERNSHIPS/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 VWU undergraduate research symposium and as a formal research paper. Students are encouraged to present their findings at a regional or national conference. Biology students will coordinate internship placement with their faculty advisor in their junior or senior year. Internships provide professional training through an on-site field experience with hands-on learning opportunities that are relevant to the chosen site. Local internship organizations in Hampton Roads including 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, policymakers, public health professionals, scientific journalists, and educators.

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