

ILLINOIS WESLEYAN UNIVERSITY

BIOLOGY

Biology is the science of life in all its forms, from the simplicity of a one-celled organism to the complexity of the human body. Like all living things, the field of biology is dynamic, constantly growing, rapidly changing and replete with new discoveries and advances. The Biology Department at Illinois Wesleyan University provides students with a superior undergraduate education across a variety of biological fields. Students can then parlay that education into a variety of career opportunities, including medicine, research, education and law.

Why Biology at Illinois Wesleyan?

- Emphasizes study at the molecular/cellular, organismal and population/community levels of organization.
- Provides students with a broad introduction to the principles of all important areas of modern biology.
- Includes discipline-specific offerings such as animal physiology, developmental biology and microbiology.
- Provides opportunities to take advanced seminar and research-oriented courses such as advanced ecology, experimental zoology, neurophysiology and molecular genetics.
- Provides the necessary background for admission to schools of medicine, dentistry, veterinary medicine, physical therapy, environmental science, osteopathy, pharmacy, optometry and Allied Health.
- IWU's medical school acceptance rate averages 70-90 percent, compared to 45 percent nationally.
- Provides preparation for positions in research and industrial laboratories.
- Science Education Alliance (SEA) which provides students an innovative lab experience and enabling them to create their own experiments.
- Partnership with the Howard Hughes Medical Institutes.

Learning from a Quality Faculty

- **Richard Alvey**, *Assistant Professor of Biology, Ph.D. — Indiana University*
Uses molecular genetic techniques to investigate the interactions between virus and their hosts.
- **David Bollivar**, *Miner Linnaeus Sherff Professor of Biology, Ph.D. — Indiana University*
Studies the molecular biology and biochemistry of tetrapyrrole biosynthesis.
- **Loralyn Cozy**, *Assistant Professor of Biology, Ph.D. — Indiana University*
Uses molecular genetic techniques and fluorescence microscopy to investigate development, patterning, and cell division in the filamentous cyanobacterium.



A Sampling of Courses Offered by Biology:

Foundations of Evolution
Comparative Chordate Anatomy
Conservation Biology
Invertebrate Zoology
Plant Anatomy and Physiology
Microbiology
Experimental Zoology
Molecular Genetics
Biostatistics and Experimental Design
Behavioral Ecology
Cellular and Molecular Biology
Animal Physiology
Neurophysiology
Bioethics

Recent May Term Courses in Biology:

Tropical Ecology in Costa Rica (travel course)
Herpetology
Field Ornithology



“The Biology Department at Illinois Wesleyan provides students with exposure to the fundamental concepts in biology. We also provide a

- **Given Harper**, *George C. and Ella Beach Lewis Professor of Biology, Ph.D. — Illinois State University*
Conducts research on pesticide contamination of birds and wildlife and has been awarded a grant from the National Science Foundation.
- **Elizabeth Haywood**, *Instructional Professor of Biology, Ph.D. — University of Illinois at Urbana-Champaign*
Research interests include the development of drug delivery vehicles by manipulating the native cell-entry or bacterial AB-type protein toxins.
- **William Jaeckle**, *Professor of Biology, Ph.D. — University of Southern California*
Research projects examine aspects of the reproduction, life history, development and ecology of invertebrate animals.
- **Edgar Lehr**, *Professor of Biology, Ph.D. — Goethe University*
Research is devoted to the biodiversity of amphibians and reptiles in Peru.
- **Loni Walker**, *Chair and Associate Professor of Biology, Ph.D. — The Ohio State University*
Studies the effect of gravity on growth and development in mosses and has been awarded grants from NASA and the National Science Foundation.
- **Brian Walter**, *Associate Professor of Biology, Ph.D. — University of Illinois at Urbana-Champaign*
Researches the developmental mechanisms that produce morphological variations between groups of fishes.

Putting Learning into Practice

- The Center for Natural Science Learning and Research (CNS) houses state-of-the-art facilities, including eight biology teaching labs and eight faculty/student research labs.
- Lab equipment includes molecular-techniques instrumentation, a scanning electron microscope and a research-grade compound microscope that is capable of differential interference contrast, phase contrast and epifluorescence microscopy.
- Many students obtain summer fellowships that allow them to do research at medical research centers, including the Houston Medical Center and Mayo Clinic, as well as major research institutions such as Harvard, the Smithsonian Institution and the University of Chicago.
- Students considering medicine as a career may participate in a May Term externship, experiencing the medical field firsthand by working with alumni and other professionals in a variety of healthcare environments.
- Recent alumni include individuals pursuing careers in marine biology, molecular genetics, physiology, ecology, secondary education and many specialties of medicine.
- Approximately 80 percent of IWU's biology graduates continue their education in medical or graduate programs, attending institutions such as the University of Chicago, University of Pennsylvania, Yale University and Duke University.

strong foundation for future study by offering students a broad curriculum and the opportunity to take courses that delve deeply into specific topics. Our goal is to provide students with the fundamental knowledge and skills that they need to be successful upon graduation.

Students have the opportunity to work with faculty on scientific research projects that can lead to publication in scientific journals. Many of our students also take advantage of the opportunity to become assistants for their peers, enhancing their understanding of biology. Students and faculty work together closely and form strong, lasting relationships.”

Dr. Loni Walker

Associate Professor of Biology and Department Chair

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**For Further Information,
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