

# 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?

- Provides the necessary background for admission to schools of medicine, dentistry, veterinary medicine, physical therapy, environmental science, osteopathy, pharmacy, optometry and paramedical programs.
- IWU's medical school acceptance rate averages 70-90 percent, compared to 45 percent nationally.
- Provides preparation for positions in research and industrial laboratories.
- Only Science Education Alliance (SEA) partner in Illinois, providing students an innovative lab experience and enabling them to create their own experiments.
- 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.

### Learning from a Quality Faculty

- **David Bollivar**, *Miner Linnaeus Sherff Professor of Biology, Ph.D. — Indiana University*  
Studies the molecular biology and biochemistry of tetrapyrrole biosynthesis.
- **Elizabeth Balsler**, *Associate Professor of Biology, Ph.D. — Clemson University*  
Research interests focus on the biology of invertebrate animals; has affiliations at the Smithsonian Marine Station and the University of Washington Marine Lab.



### A Sampling of Courses Offered by Biology:

Natural History of Illinois  
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  
Parasitology  
Animal Physiology  
Neurophysiology  
Biochemistry

### Recent May Term Courses in Biology:

Tropical Ecology in Costa Rica (travel course)  
Biochemistry of Food (travel to Hawaii)  
Herpetology  
Field Ornithology



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

- **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.
- **Given Harper**, *George C. and Ella Beach Lewis Endowed Chair 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.
- **William Jaeckle**, *Associate 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**, *Assistant 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**, *Assistant 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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