

DEFIANCE COLLEGE

Ever looked at a dragonfly? Looked close enough to study the detail in the delicate wings, the shades and patterns of color?

Ever listened to coyotes? Listened in the dark of night as they howled across great distances, declaring the lengths of their lands?

Ever smelled soil? Smelled deep enough to love its richness and to wonder at the microorganisms at work within?

Ever studied albinism? Studied everything to be found on who has it and why, how it gets passed down, how the genetics of albinism work?

Ever thought about becoming a biologist?

Biology, the broad study of organisms, attempts to understand, organize, and classify the living world from the sub-cellular mechanisms of individual cells to plant and animal diversity and behavior.

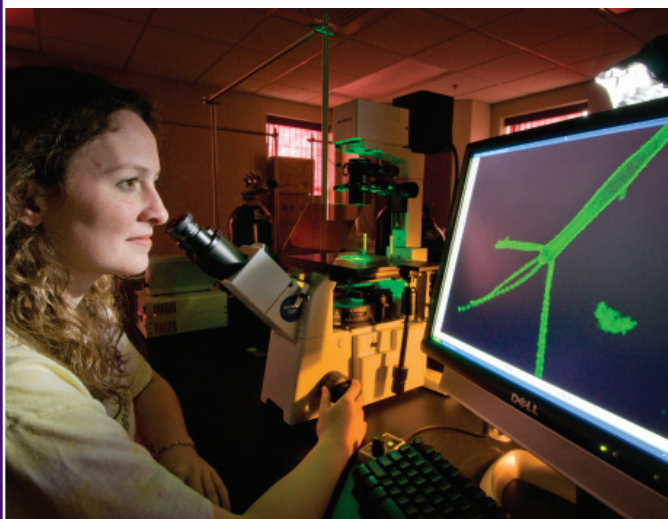
The Defiance College biology program prepares students for a wide variety of career opportunities. After completing a set of core courses, students work closely with professors to tailor their learning experience through coursework and internships to individual long-term career goals, from graduate work in microbiology to careers in zoology or restoration ecology.

Ever needed a place to become a biologist?

701 North Clinton Street
Defiance, OH 43512
www.defiance.edu
419-784-4010
1-800-520-GO DC

Biology

Bachelor of Science Degree with a major in Biology



Students learn to use some of the most advanced equipment in the field such as fluorescent microscopes (above), real-time Polymerase Chain Reaction (PCR), and Gas Chromatography Mass Spectrometry.

"My time as a biology major at Defiance College has been extremely rewarding.

The opportunities I have had as a biology major at Defiance College will enable me to enter the work force with hands-on field experience, allowing me to enter my future with confidence in my education and myself."

Jessica Maxcy



Jessica Maxcy takes coordinates using a Global Positioning System (GPS) in one of the local creeks.

Biology is the broad study of organisms. It examines every aspect of life from single-celled organisms to complex ecological interactions. Areas of biology include genetics, evolution, ecology, and other more focused fields such as botany, entomology, ornithology, and herpetology, just to name a few. Current advances in genetics, cellular and molecular biology, and ecology have greatly influenced areas of medicine, agriculture, and environmental science.

Whichever path you set your sights on, you can be assured that a biology degree from Defiance College will prepare you for whatever challenges you may face in your professional career. For example, if you have aspirations for graduate work in the field of molecular or microbiology, you may want to focus your undergraduate studies in courses such as histology, microbiology, immunology, or biochemistry. If, however, you enjoy the outdoors and wildlife, you may choose courses such as field botany or zoology, ecology, or restoration ecology.

Pre-Professional Programs

The science division at Defiance College offers pre-professional programs in the areas of Medicine, Veterinary Science, Dentistry, Optometry, and Chiropractic. Upon completion of the program students would be prepared to take entrance exams and apply to any Graduate Professional schools in these areas. The pre-professional program offers all the classes required for acceptance into professional and graduate schools.

After College — What's Next?

The biology program is one of the most flexible of the natural science majors. The program prepares students for teaching careers, graduate school, and a variety of other professional programs. Students in the past few years have gone on to graduate school in the fields of herpetology, molecular biology, conservation, and ecology. This program shares Defiance College's stellar success rate in placing its graduates in top-notch professional and graduate schools.

www.defiance.edu/pages/NS_majors_biology.html

The Faculty

Nathan Griggs, Ph.D.

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Douglas D. Kane, Ph.D.

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Kenneth Adair, Ph.D.

Assistant Professor of Chemistry
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Somnath Dutta, Ph.D.

Associate Professor of Chemistry
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Mary Ann Studer, M.S.

Associate Professor of Physical Science
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Additionally, part-time instructors may teach specialized courses.



Students from the Ecology class perform water testing at a local river.

The Courses

- BI 120, 129 Principles of Biology I & II
- CH 123, 124 General Chemistry I & II
- NS 198 Natural Science Seminar
- NS 491 Internship
- NS 499 Senior Capstone
- MA 106 Pre-Calculus Mathematics
- PY 230 Behavioral Statistics **OR**
- BA 212 Business Statistics

A Biology major selects more upper-level science courses for a total 55 hours, allowing the design of a specialty within the major.

Select 1 course from Group I:

- BI 250 Field Zoology
- BI 270 Field Biology
- BI 320 Ecology
- BI 357 Comparative Vertebrate Anatomy
- BI 367 Vertebrate Physiology

Select 1 course from Group II:

- BI 338 Histology
- BI 358 Microbiology
- BI 431 Molecular Biology
- BI 462 Immunology
- BI 480 Genetics

plus

- Three 300-400 level Biology courses
- One 300-400 level science course

Environmental Studies and Field Biology are optional concentrations which may be added to the Biology major.

Environmental Studies Concentration (17 hours)

- BI 420 Restoration Ecology I
- PH 202 Introduction to Geology
- NS 310 Geographic Information Systems
- NS 393 Environmental Topics
- HI 345 Ohio Area **OR**
- EC 205 Macroeconomics

Field Biology Concentration (16 hours)

- BI 250 Field Biology
 - BI 270 Field Zoology
 - NS 310 Geographic Information Systems
- One elective chosen from the following:*
- BI 320 Ecology
 - BI 350 Fisheries and Wildlife Management
 - BI 420 Restoration Ecology
 - PH 202 Introduction to Geology

Chemistry Minor

- CH 123, 124 General Chemistry I & II
- Plus a minimum of 12 additional credits selected from Chemistry courses numbered 200 or above

Internship Experiences

All science majors are encouraged to complete 200 hours of internship experience. Biology majors often intern in hospitals, veterinary clinics, zoos, or private laboratories.

Through internships, Defiance College's science students receive actual work experiences at hospitals, and biological, chemical, and agricultural laboratories. Scientific information is expanding rapidly, but up-to-date information is sometimes slow to appear in classroom and laboratory materials. Therefore, students are encouraged to develop the skills needed to seek out and assimilate new developments in areas of their greatest interest. Faculty encourage and help students to develop the initiative and ability to understand and use new knowledge and theory in their field and related fields.

Defiance College admits students regardless of race, color, creed, sex, national or ethnic origin, disability, or sexual orientation. 6/11

Life Science Education

Students interested in obtaining a teaching license will complete education courses totaling at least 30 hours. These courses consist of an introductory education course taken the second semester of the freshman year, several field experience components in a school system, educational psychology, methods in the teaching field, and student teaching. This licensure allows one to teach any of the Life Sciences in grades 7-12.

Come for a Visit!

A campus visit is the best way to find out how Defiance College defies the ordinary college experience. We'll arrange for you to meet with an admissions counselor, professors, coaches, students, and learn about scholarship and financial aid opportunities. You can sit in on a class, tour campus, and stay overnight if you wish. Call our Office of Admissions at 419-783-2359 or 1-800-520-GO DC to set up your appointment.