

Zoology

Zoology is the study of all animals, ranging from single-celled animals (protozoans) to birds and mammals (vertebrates). The zoology major is housed in the Department of Evolution, Ecology and Organismal Biology, which offers courses in the major animal groups such as invertebrates, fish, birds, and mammals, as well as courses in physiology, ecology, behavior, aquatic biology, and evolution.

Pursuing Zoology at Ohio State

Students interested in majoring in zoology should have a good background in biology, chemistry, physics, math, and skills in written and verbal communication. Students with such a background and skills will find it much easier to complete the college-level courses in the physical and biological sciences required for the zoology major.

All Ohio State freshman applicants are considered within a competitive admission process for the Columbus campus. The primary criteria for admission are the completion of the applicant's high school college preparatory program, performance in that program as indicated by class rank and/or grade-point average, and performance on either the ACT or SAT. Students interested in majoring in zoology should contact the coordinating advisor of the Department of Evolution, Ecology, and Organismal Biology. The department's coordinating advisor will explain the requirements for a zoology major and discuss career plans and goals with the student. A member of the faculty will then be assigned as the student's major advisor. The student then meets with the advisor to develop a major program based on the student's career plans and goals.

Zoology Requirements

A major in zoology requires preparation in chemistry, physics, math, and biology. The chemistry requirement includes general and organic chemistry. Two quarters of physics, math through calculus, and two quarters of introductory biology are required.

The zoology major requires that students complete five core courses in the Department of Evolution, Ecology, and Organismal Biology; the core includes courses in evolution, animal diversity and systematics, ecology, animal form and function, and cellular and developmental biology. Some of the core courses are accompanied by a laboratory. A course in molecular genetics is also required. The remainder of the 45 credit hours needed for the zoology major includes additional zoology courses, and can include courses in related areas (e.g., microbiology, molecular genetics, plant biology, entomology, etc.) that must be approved by the student's major advisor.

Co-Curricular Opportunities

No other learning experience can match the value of a "hands-on" research project. Students in the College of Biological Sciences are encouraged to engage in meaningful undergraduate research opportunities. Such opportunities allow students to develop their scientific curiosity, and to discover whether a career in research is a good fit. Information about choosing an undergraduate research laboratory and faculty research interests is available on the Department of Evolution, Ecology and Organismal Biology web page and on the College of Biological Sciences web page at www.biosci.ohio-state.edu/undergrad/undergrad-research.php.

The Zoology Club and a College of Biological Sciences honorary student organization enhance learning opportunities and the quality of the undergraduate experience for zoology students. These clubs provide opportunities for students to interact with faculty, discuss careers and research areas with scientists from the Ohio State campus and beyond, and participate in service activities.

Zoology students may take courses at Ohio State University's "Island Campus," Stone Laboratory. Located on Gibraltar Island in Put-in-Bay harbor on Lake Erie, this freshwater biological field station and research laboratory offers introductory and upper-level courses suitable for undergraduate students in biological sciences.

Honors & Scholars Programs

The Honors Program in the Colleges of the Arts and Sciences provides high-ability students opportunities to pursue challenging academic programs. Honors students in zoology are encouraged to meet with their faculty advisor on a regular basis and to construct an enhanced curriculum that includes honors courses, upper-division courses to meet general requirements, rigorous sequences, honors seminars, and a strong major, including a significant research experience.

The Ohio State Scholars Programs feature residential communities for students who share academic interests and career goals. Two of the Scholars programs of interest to zoology students are the Biological Sciences and Health Sciences Scholars Programs. The Biological Sciences Scholars Program emphasizes research, with individualized advising and significant lab and field experience. The Health Sciences Scholars Program is focused on preparing students for careers in health sciences and health care.

For more information, check these web sites:

Evolution, Ecology & Organismal Biology:

www.biosci.ohio-state.edu/~eeob

College of Biological Sciences: www.biosci.ohio-state.edu

Ohio State: www.osu.edu

Admissions: undergrad.osu.edu

Multicultural Center: multiculturalcenter.osu.edu

Curriculum Sample

This is a sample list of the classes a student will take to pursue a degree in Zoology. Since university students need more than specific education in a narrow field, they also will take classes to complete the General Education Curriculum (GEC). The GEC will allow students to develop the fundamental skills essential to collegiate success across major programs. Course work options satisfying the GEC often come from a variety of academic areas of study allowing students to tailor their GEC toward their interests. Note: This sample represents one of several possible paths to a degree in Zoology. Consult the departmental web site, www.biosci.ohio-state.edu/~eeob, for details on each specific track.

Freshman Year:

Biological Sciences Survey	1
Biology	10
Inorganic Chemistry	15
Calculus	10
GEC (English composition)	5
GEC (foreign language)	5
Freshman Seminar	1
Total hours	47

Sophomore Year:

Organic Chemistry	6
Evolution	5
General Genetics	5
Physics	10
GEC (foreign language)	15
GEC (social sciences)	5
Total hours	46

Junior Year:

Ecology	3
Diversity and Systematics	6
Animal Form and Function	4
Cellular and Developmental Biology	4
Elective	5
GEC (second writing course)	5
GEC (arts and humanities)	20
Total hours	47

Senior Year:

Zoology electives	13
Electives	15
Undergraduate research	5
GEC (arts and humanities)	5
GEC (social sciences)	10
Total hours	48

Career Prospects in Zoology

As a major in the Colleges of the Arts and Sciences, students majoring in zoology are well prepared for entry-level positions in zoology as well as other fields in the biological sciences. A student with a BS degree and a major in zoology would be qualified for a position as a research assistant, technician, or staff member in a research laboratory or private company dealing with biology supplies or services. Depending on a student's background and interests, such opportunities would be available in various private companies that are actively involved in biological research or sales and service of biological equipment and supplies.

Major research universities and federal, state, and local government agencies also hire entry-level technicians to staff their research laboratories. Entry into these positions at an advanced level, or advancement above an entry-level position, normally involves training at the graduate or professional level.

A major in zoology provides excellent background in the biological sciences for a student desiring to pursue a professional degree in medicine, veterinary medicine, dentistry, or an allied field. Students completing professional degrees (e.g., M.D., D.V.M., D.D.S.) most often establish private medical practices.

A major in zoology also provides a diverse background in the biological sciences for a student hoping to pursue an advanced degree in graduate school (M.S. and Ph.D.). Most Ph.D. students, as part of their training, serve as research and teaching assistants and thereby earn a large part of their living and educational expenses while they are in graduate school. Students completing graduate degrees in zoology often pursue jobs as teachers in colleges or universities, and such positions provide opportunities for continuing independent research. Some students may enter high school teaching in biology by completing a master's program in education. Graduates with advanced degrees also find diverse career opportunities with private companies or governmental agencies. Depending on a student's interests and background, such opportunities range from researching and writing environmental impact statements for private consulting firms to research positions with federal or state wildlife and fisheries agencies.

Salaries for entry-level "technical" positions vary according to a student's area of interest, background, and placement. Students who complete graduate degrees can expect to earn substantially more than students with a bachelor's degree. Salaries in general are dependent upon a variety of economic factors and change with market trends.

For more information about careers in zoology, call or write the Arts and Sciences Career Services Office, 06 Denney Hall, 164 West 17th Avenue, Columbus, Ohio 43210-1371, (614) 292-1868.

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