BIOLOGY (B.S.)

Department of Biological sciences
College of Arts & Sciences
Eastern Kentucky University

Biology at EKU
The Department of Biological Sciences' undergraduate curricula provide students with a solid foundation in biology plus the knowledge and excitement generated by recent research. Excellent opportunities exist for education and research in many areas of modern biology, including animal behavior, aquatic biology, botany, cell & molecular biology, evolution, ecology, microbiology, systematics, wildlife biology and management, and zoology.

Class sizes are small and there is frequent interaction with the faculty. Facilities for teaching and research are available both on and off campus. Laboratory experiences are an essential component of virtually all courses, so students gain practical as well as theoretical knowledge. Opportunities exist for field experiences throughout Kentucky, neighboring states, and even abroad. If you are looking for a biology program where faculty place a high priority on both teaching and research, and getting students involved, EKU is the place!

Careers in Biology
The careers for which biology students prepare themselves are quite diverse. Nationwide, about 10 percent of biology majors go on to graduate school in biology and other sciences, and about 20 percent go on to medical school. A small but significant fraction of students become teachers in elementary and secondary schools. Others take jobs as biologists in industry, government, the nonprofit sector, law, journalism, and many other professions. Biology at EKU provides the educational breadth to pursue these opportunities.

Degree Programs
The Department of Biological Sciences offers the Bachelor of Science degree in Biology for students who wish to pursue a profession in the biological sciences. The department also offers the B.S. degree in Biology-Teaching, Environmental Studies, and Wildlife Management, pre-professional curricula in Pre-Medicine/Pre-Dentistry, Pre-Veterinary Medicine, & Pre-Forestry, and a minor in Biology. At the graduate level, the department offers the Master of Science in Biology, with an option available in Applied Ecology.

Eastern Kentucky University

As you consider where you'll pursue your studies, Eastern Kentucky University encourages you to ask yourself, "What do I want to do with my life?" and "Who can help me reach that destination?"

Before we tell you about EKU, let's focus on your needs. What are you looking for in a college or university?

- Renowned, accessible professors; low student/faculty ratio
- State-of-the-art facilities
- Extensive curriculum
- Wide network of campus organizations
- Affordable cost
- Inviting campus

Achieving your goals depends on the quality of the faculty and curriculum at the school you choose to attend. Every college and university touts facilities, but few can match the accolades of our faculty. At EKU you'll reach beyond the borders of classroom discussion to hands-on experience and networking opportunities with experts in the field.

EKU graduates are world leaders in areas as diverse as international business and homeland security; local, state and national government; as well as drama and law. Campus facilities, such as the Studio for Academic Creativity, which is designed to enhance research, writing, and presentation skills, and our new state-of-the-art science building, ensure our students of exposure to technologies vital to real world success.

We hope you'll see that from our view there are no limitations, just possibilities.

- A comprehensive, public university serving more than 16,000 students
- Undergraduate and graduate excellence through 168 associate, baccalaureate, master's, specialist and cooperative doctoral programs
- Quality and diversity in faculty and staff
- Student/professor ratio of 17:1
- 66-acre main campus in Richmond, regional campuses in Corbin, Danville, Lancaster and Manchester, and higher education centers throughout the Commonwealth

WWW.EKU.EDU

For More Information

Office of Admissions
SSB CPO 54
Eastern Kentucky University
521 Lancaster Avenue
Richmond, KY 40475-3102
www.admissions.eku.edu
800-465-9191
859-622-2106

Department of Biological Sciences
Moore 235
Eastern Kentucky University
521 Lancaster Avenue
Richmond, KY 40475-3102
www.biology.eku.edu
859-622-1531

Biology (B.S.)

Major Requirements.....35-36 hours
Biology Core
BIO 121, 131, 141, 315, 316, 320; 328 or 348; 490, 514, and one elective in biology at the 300-500 level.
Options
Aquatic Biology.....15 hours
BIO 525, 542, 557, 558, and one course from BIO 340, 556, 561.
Botany.....15-16 hours
BIO 335, 521, 598**, and two courses from BIO 522,525, 536, 599; BIO 531 or CHE 530 and 532.
General .....15 hours
Microbial, Cellular and Molecular Biology.....15 hours
BIO 331; 511 or 527 or 528 and at least nine additional hours from BIO 511, 527, 528, 530, 531, 535, or 598.
Supporting Course Requirements.....32-33 hours
CHE 111, 111L, 112, 112L or 112HL, 361, 361L, 362 and 362L;MAT 124* or 261*; PHY 131, 132; STA 215 or STA 270.
General Education Requirements.....30 hours
Standard General Education program, excluding blocks II,IVA, IVB, VII (QS), and VIII (6 hours). Refer to Section Four of the EKU catalog for details on the General Education and University requirements.
University Requirement.....1 hour
A SO 100
Free Electives.....12-30 hours
Total Curriculum Requirements.....128 hours

*** A preparatory course in mathematics (MAT 109) may be required before admission to calculus.**
**** Must enroll for 3 hours credit.**

MINOR IN BIOLOGY

A student may qualify for a minor in biology by completing 21 semester hours to include BIO 121, 131, 141, and nine additional hours selected from those 300 through 500 level courses normally taken for one of the majors in the department. Students may also seek a minor in biology in conjunction with the completion of a teaching certificate, which will qualify them to teach biology at the secondary level. Teacher certification with a minor in biology requires the same 21 semester hours of course work stipulated in the above paragraph.

BIOLOGY COURSES

BIO 121	Principles of Biology
BIO 131	General Botany
BIO 141	General Zoology
BIO 315	Genetics
BIO 316	Ecology
BIO 320	Principles of Microbiology
BIO 328	Plant Physiology
BIO 331	Cell Biology
BIO 335	Plant Systematics
BIO 340	Marine Biology
BIO 342	Comparative Vertebrate Anatomy
BIO 348	Animal Physiology
BIO 349	Applied Learning in Biology
BIO 399	Trends in the Biological Sciences
BIO 490	Biology Seminar
BIO 510	Biostatistics
BIO 511	Experimental Approaches in Molecular Biology
BIO 514	Evolution
BIO 521	Forest Ecology
BIO 522	Grasses and Grasslands
BIO 525	Aquatic and Wetland Plants
BIO 527	Immunology
BIO 528	Virology
BIO 530	Microbial Physiology and Genetics
BIO 531	Principles of Molecular Biology
BIO 532	Conservation Biology
BIO 533	Bioinformatics: Principles and Applications
BIO 535	Pathogenic Microbiology
BIO 536	Dendrology
BIO 542	Freshwater Invertebrates
BIO 546	Histology
BIO 547	Comparative Vertebrate Embryology
BIO 550	Animal Behavior
BIO 553	Mammology
BIO 554	Ornithology
BIO 555	Behavioral Ecology
BIO 556	Herpetology
BIO 557	Ichthyology
BIO 558	Freshwater Ecology
BIO 561	Fisheries Biology
BIO 598	Special Problems
BIO 599	Topics in Biological Sciences

OTHER COURSES

CHE 111	General Chemistry I
CHE 111L	General Chemistry Lab I
CHE 112	General Chemistry II
CHE 112L	General Chemistry Lab II
CHE 112HL	General Chemistry Honors Lab II
CHE 361	Organic Chemistry I
CHE 361L	Organic Chemistry Lab I
CHE 362	Organic Chemistry II
CHE 362L	Organic Chemistry Lab II
CHE 530	Biochemistry of Macromolecules
CHE 532	Biochemistry Laboratory
MAT 124	Calculus I
MAT 261	Calculus with Applications for Science
PHY 131	College Physics I
PHY 132	College Physics II
STA 215	Introduction to Statistical Reasoning
STA 270	Applied Statistics I