



PRE-MEDICAL SCIENCES

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

Pre-Medical Sciences at EKU

Students with career interests in medicine, dentistry, osteopathic medicine, or podiatry may fulfill general admission requirements of specific professional schools by pursuing the Bachelor of Science degree in Biology or other majors (e.g., B.S. in Chemistry with a Biochemistry Option). Students pursuing degrees in either department will concentrate in biology and chemistry, with appropriate and complementary courses in humanities, social sciences, and communications. Courses in mathematics and physics will also be required. Students interested in medical fields are assigned to a pre-medical sciences advisor. These advisors work closely with students to plan programs of study and to prepare for the process of gaining admission to the chosen professional school.

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. 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 Medicine or Dentistry

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. Acceptance rates to medical/dental schools for students from EKU average about 70% of those applying in any given year. Graduates from this program also are qualified for jobs as research biologists in university, governmental, and industrial laboratories; they also are good candidates for admission to graduate schools.

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

Dept. of Biological Sciences - Moore 235
Dept. of Chemistry - Moore 337
Eastern Kentucky University
521 Lancaster Avenue
Richmond, KY 40475-3102
www.biology.eku.edu (859-622-1531)
www.chemistry.eku.edu (859-622-1456)

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



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Pre-Medical Sciences (Biology B.S. or Chemistry B.S. or B.A.)

PRE-MEDICAL SCIENCE

Students who have career interests in medicine, dentistry, osteopathic medicine, or podiatry may fulfill general admission requirements of specific professional schools by pursuing the Bachelor of Science degree in Biology or the Bachelor of Science (Biochemistry Option) degree in Chemistry. Students pursuing degrees in either department will concentrate in biology and chemistry, with appropriate and complementary courses in humanities, social sciences, and communications. Courses in mathematics and physics will also be required. Students interested in medical fields are assigned to a pre-medical sciences advisor. These advisors work closely with each student to help plan programs of study and prepare for the process of gaining admission to the chosen professional school.

Biology (B.S.)

Major Requirements.....35-36 hours
BIO 121, 131, 141, 315, 316, 320; 328 or 348; 490, 514, one elective in biology at the 300-500 level.
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.....28-30 hours
Total Curriculum Requirements.....128 hours

*A preparatory course in mathematics may be required before admission to calculus.

Chemistry (B.S.)

Major Requirements 43-47 hours
Chemistry Core 32-33 hours
CHE 111, 111L, 112, 112L or 112HL, 325, 361, 362, 361L, 362L, 385, 473, 484, 485, 574, 575, and must include one of the following options:
Options**
Biochemistry 11 hours
CHE 525, 530, 531, 532.
Chemistry 14 hours
CHE 515, 525, 530, 550. For the program to be approved by the ACS, the student must elect six additional hours of advanced chemistry courses.
Supporting Course Requirements 22-34 hours
Biochemistry 34 hours
BIO 121; 131 or 141; 315 or 320; MAT 124*, 224, 225, PHY 201, 202.
Chemistry 22 hours
MAT 124*, 224, 225, PHY 201, 202. A year of foreign language is recommended.
General Education Requirements 30-33 hours
Standard General Education program, excluding blocks II, IVA, IVB, VII (QS), and VIII (6 hours). Pre-medical students must take PSY 200. Refer to Section Four of the EKU catalog for details on the General Education and University requirements.
University Requirement 1 hour
ASO 100
Free Electives 19-26 hours
Total Curriculum Requirements 128 hours

*Strongly suggested electives include Histology (BIO 546), Comparative Vertebrate Embryology (BIO 547), and Animal Physiology (BIO 348).

PRE-DENTAL

Chemistry (B.A.)

Major Requirements 30-31 hours
CHE 111, 111L, 112, 112L or 112HL, 325, 361, 362, 361L, 362L, 385, 470, 484, plus six hours of upper division chemistry electives.
Supporting Course Requirements 14 hours
MAT 124*; PHY 131 or 201; PHY 132 or 202.
General Education Requirements 36 hours
Standard General Education program, excluding blocks II, IVB, 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
ASO 100
Free Electives46-47 hours
Total Curriculum Requirements 128 hours

* A preparatory course in mathematics (MAT 109) may be required before admission to MAT 124.

BIOLOGY & CHEMISTRY 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 331	Cell Biology
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 527	Immunology
BIO 528	Virology
BIO 530	Microbial Physiology and Genetics
BIO 531	Principles of Molecular Biology
BIO 533	Bioinformatics: Principles and Applications
BIO 535	Pathogenic Microbiology
BIO 546	Histology
BIO 547	Comparative Vertebrate Embryology
BIO 598	Special Problems
BIO 599	Topics in Biological Sciences
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 325	Quantitative Analytical Chemistry
CHE 361	Organic Chemistry I
CHE 361L	Organic Chemistry Lab I
CHE 362	Organic Chemistry II
CHE 362L	Organic Chemistry Lab II
CHE 385	Chemical Literature
CHE 470	Principles of Physical Chemistry
CHE 473	Physical Chemistry Laboratory
CHE 484	Chemistry Colloquium
CHE 485	Chemistry Seminar
CHE 515	Analysis and Characterization
CHE 525	Instrumental Methods
CHE 530	Biochemistry of Macromolecules
CHE 531	Metabolic Biochemistry
CHE 532	Biochemistry Laboratory
CHE 550	Inorganic Chemistry
CHE 574	Physical Chemistry I
CHE 575	Physical Chemistry II

OTHER COURSES

MAT 124	Calculus I
MAT 224	Calculus II
MAT 225	Calculus III
MAT 261	Calculus with Applications for Science
PHY 131	College Physics I
PHY 132	College Physics II
PHY 201	University Physics I
PHY 202	University Physics II
PSY 200	Introduction to Psychology
STA 215	Introduction to Statistical Reasoning
STA 270	Applied Statistics I