



B.S. Biology: Pre-Medical & Other Health Careers Requirements

Students in our program learn about fundamental biological concepts and principles, scientific thinking and experiment design. KU students have been preparing for and successfully entering medical, veterinary, or dental schools for years, thanks to strong academics and a supportive faculty.

Student Learning Outcomes

1. Students will demonstrate advanced competence in their area of specialization, either organismal biology/ecology, cell biology/ microbiology, pre-medical science, medical lab science, or allied health science.
2. Students will demonstrate proficiency in skills useful in gaining successful employment in biology related positions or admission to graduate or professional programs, including clear articulation of his or her marketable skills in the form of professional-quality resumes and cover letters.
3. Students will be able to research and write a review paper that effectively conveys technical concepts and information in their discipline in a clear and organized fashion, following all of the usual conventions of the discipline.
4. Students will demonstrate oral communication skills such that they can effectively convey concepts and information in their discipline.
5. Students will be able to effectively utilize the scientific method.

Note that all students must achieve 120 undergraduate credits and a minimum 2.0 overall GPA to graduate. The final GPA requirement for Biology: Molecular/Micro/Cell is 2.0. At least four courses in the major program must be at the 300- or 400-level. Students must earn a C or better in BIOL 104.

Required Biology Core Courses – 23 credits

BIOL 104 Principles of Biology (4 credits)
BIOL 106 Introduction to Zoology (4 credits)
BIOL 108 Introduction to Botany (4 credits)
BIOL 216 Genetics (3 credits)
BIOL 224 Applied Environmental Microbiology (3 credits)
BIOL 270 Research Methods (3 credits)
BIOL 380 Senior Seminar (2 credits)

Required Pre-Medical Core Courses – 10 to 11 credits

BIOL 264 Comparative Anatomy (4 credits)
BIOL 346 Molecular Biology (3 credits) or BIOL 350 Cell Biology (3 credits)
BIOL 257 Anatomy & Physiology II (3 credits) or BIOL 235 General Physiology (4 credits)

Biology: Pre-Medical Major Electives – 15 to 18 credits

Select four courses from the following and one Biology Field Elective:

BIOL 246 Diet and Disease (3 credits) or CHEM 312 Biochemistry II (4 credits)
BIOL 306 Food Microbiology (3 credits)
BIOL 310 Biology of Cancer (3 credits)
BIOL 330 Histology (3 credits)
BIOL 331 Medical Mycology (3 credits)
BIOL 334 Medical Parasitology (3 credits)
BIOL 336 Medical Microbiology (3 credits)

BIOL 354 Developmental Biology (3 credits)
BIOL 356 Immunology (3 credits)
BIOL 357 Virology (3 credits)
BIOL 370 Research (3 credits) or BIOL 390 Internship (3 credits)
CHEM 310 Biochemistry I (4 credits)

Biology Field Elective

Select one course:

BIOL 218 Vertebrate Biology (3 credits)
BIOL/EVSC 222 Environmental Biology (3 credits)
BIOL/MRSC 226 Marine Biology (3 credits)
BIOL 230 Taxonomy of Vascular Plants (3 credits)
BIOL 244 Ecology (4 credits)
BIOL 302 Entomology (3 credits)
BIOL 308 Ornithology (3 credits)
BIOL 314 Animal Behavior (3 credits)
BIOL 322 Population and Community Ecology (3 credits)
BIOL 324 Plant Ecology (3 credits)
BIOL/MRSC 326 Marine Ecology (3 credits)
BIOL 342 Herpetology (3 credits)
BIOL 332 Aquatic Ecology (3 credits)
BIOL 358 Conservation Biology (3 credits)
Biology courses offered at Chincoteague Field Station (200-level or above)

Other Required Courses – 11 to 12 credits

Note that CHEM 100 General Chemistry I and CHEM 102 General Chemistry II are included as part of Directed General Education requirements listed below.

CHEM 214 Organic Chemistry I (4 credits)
CHEM 216 Organic Chemistry II (4 credits)
MATH 106 Trigonometry (3 credits) or MATH 115 Precalculus (3 credits) or MATH 181 Calculus (4 credits)

Directed General Education Courses – 12 credits

These courses are required for the major and satisfy the general education requirement “Understanding Science and Technology.”

CHEM 100 General Chemistry I – Category C1 (4 credits)
CHEM 102 General Chemistry II – Category C2 (4 credits)
PHYS 40 General Physics I (4 credits) or PHYS 100 Physics I – Category C3 (4 credits)

University Electives – 11 to 16 credits

Program Plan Code: BS_BIOL_PRMD

Effective Date: Fall 2026

KU B.S. Biology: Pre-Medical & Other Health Careers Major Check Sheet

Student Name:

Student ID Number: **NEW**

This check sheet provides a mechanism for students and advisors to keep track of a student's progress in the program. Please refer to the program requirements for more details regarding options.

Note that all students must achieve 120 undergraduate credits and a minimum 2.0 overall GPA to graduate. The final GPA requirement for Biology: Pre-Medical & Other Health Careers is 2.0. At least four courses in the major program must be at the 300- or 400-level. Students must earn a C or better in BIOL 104.

Required Biology Core Courses – 23 credits

BIOL 104 Principles of Biology (<i>must earn a C or better</i>)	4 credits	Grade:
BIOL 106 Introduction to Zoology	4 credits	Grade:
BIOL 108 Introduction to Botany	4 credits	Grade:
BIOL 216 Genetics	3 credits	Grade:
BIOL 224 Applied Environmental Microbiology	3 credits	Grade:
BIOL 270 Research Methods	3 credits	Grade:
BIOL 380 Senior Seminar	2 credits	Grade:
Total Credits	23 total credits	

Required Pre-Medical Core Courses – 10 to 11 credits

BIOL 264 Comparative Anatomy	4 credits	Grade:
BIOL 346 Molecular Biology <i>or</i> BIOL 350 Cell Biology	3 credits	Grade:
BIOL 257 Anatomy & Physiology II <i>or</i> BIOL 235 General Physiology	3-4 credits	Grade:
Total Credits	10-11 total credits	

Biology: Pre-Medical Major Electives – 15 to 18 credits

Course 1:	credits	Grade:
Course 2:	credits	Grade:
Course 3:	credits	Grade:
Course 4:	credits	Grade:
Biology Field Elective:	credits	Grade:
Total Credits	15-18 total credits	

Other Required Courses – 11 to 12 credits

CHEM 100, CHEM 102, and PHYS are required and are included as part of Directed General Education.

CHEM 214 Organic Chemistry I	4 credits	Grade:
CHEM 216 Organic Chemistry II	4 credits	Grade:
MATH 106 <i>or</i> MATH 115 <i>or</i> MATH 181	3-4 credits	Grade:
Total Credits	11-12 total credits	

Directed General Education Courses

These courses are required for the major and satisfy the general education requirement "Understanding Science and Technology."

CHEM 100 General Chemistry I	4 credits	Grade:
CHEM 102 General Chemistry II	4 credits	Grade:
PHYS 40 General Physics I <i>or</i> PHYS 100 Physics I	4 credits	Grade:

University Electives – 11 to 16 credits

Course 1:	credits	Grade:
Course 2:	credits	Grade:
Course 3:	credits	Grade:
Course 4:	credits	Grade:
Total Credits	11-16 total credits	

Summary of Graduation Requirements

Total credits from major courses	60
Total credits from general education program	44
Total credits from university electives	16
Minimum total credits to graduate	120
Minimum overall GPA	2.0
Minimum GPA in major program	2.0

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