Bachelor of Arts: Biology - Biomedical (84M)
58-62 hours

This emphasis of the biology major offers preparation for allopathic, osteopathic, chiropractic, dental, veterinary, optometric, podiatric and other health-related programs. In addition, it prepares students for the graduate study in biomedical sciences, i.e., pharmacology, toxicology, pathology, physiology, cellular biology, and related areas. The combination of required and elective courses equal 58-62 credit hours.

Introductory Track—15 hrs
___BIOL2051 Gen Bio: Organismal Diversity, 4 hrs
___BIOL2052 Gen Bio: Cell Structure & Function, 4 hrs
___BIOL3100 Evolution, Ecology & the Nature of Science, 3 hrs
___BIOL3140 Genetics, 4 hrs

Required Chemistry*—5-8 hrs
___CHEM1110 General Chemistry I, 4 hrs
___CHEM1120 General Chemistry II, 4 hrs
OR
___CHEM1130 General Chemistry I-II, 5 hrs

Required Advanced Chemistry Courses—8 hrs
___CHEM2210 Organic Chemistry I, 3 hrs
___CHEM2230 Organic Chemistry Lab, 2 hrs
___CHEM2220 Organic Chemistry II, 3 hrs

Required Math (chose one option)—4-5 hrs
1.____MATH1120 Mathematics for the Biological Sciences, 3 hrs
   **AND____MATH1130 Trigonometry, 2 hrs
OR
2.____MATH1140 Pre-calculus, 4 hrs
OR
3.____MATH1420 Calculus I, 4 hrs

Required Physics—8 hrs
___PHYSICS1511 General Physics I, 4 hrs
___PHYSICS1512 General Physics II, 4 hrs

Required Biology—8 hrs
___BIOL3101 Anatomy and Physiology I, 4 hours (Fall, Spring Summer)
___BIOL3102 Anatomy and Physiology II, 4 hours (Fall, Spring Summer)
OR
___BIOL3106 Vertebrate Anatomy (Spring), 4 hrs
___BIOL3102 Anatomy and Physiology II, 4 hrs (Fall, Spring Summer)

Total cognates and required biology = 48-52 hrs

Major Elective Courses (*10 hours of electives, including at least 7 of BIOL 4XXX)
___BIOL3106 Vertebrate Anatomy (Spring), 4 hrs—if not used in place of Anatomy and Physiology I
___BIOL3108 Histology (Odd Springs), 4 hrs
___BIOL3147 Cancer and Emerging Infectious Disease (Spring), 3 hrs
___BIOL3151 General Microbiology (Fall, Spring), 4 hrs
___BIOL3190 Undergraduate Research, 1-3 hrs
___BIOL4114 Comparative Animal Physiology (Even Falls), 4 hrs
___BIOL4116 Neurobiology (Spring), 3 hrs
___BIOL4128 Cell Biology (Spring), 4 hrs
___BIOL4129 Genomics (Even Falls), 4 hrs
___BIOL4137 Vertebrate Physiology (Odd Falls), 4 hrs
___BIOL4144 Virology (Even Springs), 4 hrs
___BIOL4146 Developmental Biology of Animals (Fall), 4 hrs
___BIOL4150 Immunology (Fall, Spring), 4 hrs
___BIOL4157 Biostatistics (Fall), 3 hrs
___BIOL4164 Mammalogy (Fall), 4 hrs
___CHEM4510 Biochemistry I, 3 hrs**

Recommended LAC:
___STAT 1772 Statistics (LAC 1C), 3 hrs
___SOC1000 Introduction to Sociology (LAC 5A), 3 hrs
___PSYCH1001 Introduction to Psychology, (LAC 5B), 3 hrs

Other Recommended:
___HPE 2160 Medical Terminology, 2 hrs
___Additional psychology courses
___CHEM 4520 Biochemistry II, 3 hrs.* (see note below)

NOTES:
- Must have both a UNI cumulative and a UNI major/plan GPA of 2.00 or higher, with a grade of C-(1.67) or higher in all courses that are applied to the major.
- At least 4 credits of biology electives at the 4000 level need to be taken at UNI.
- Students invited to do Honors Research will complete 4 credit hours of BIOL3190 Undergraduate Research and 1 credit hour of BIOL3191 Senior Thesis. Students must declare the HONORS EMPHASIS in order for it to reflect on the degree audit/transcript
- **For students pursuing graduate programs in allopathic or osteopathic medicine, physician assistant, or veterinary medicine, completion of the Biochemistry I and Biochemistry II is recommended and would satisfy a Chemistry minor in addition to the BA Biology Biomedical degree.