Bachelor of Arts: Biology (84K)
2019-2020
58 hours

The Bachelor of Arts major provides a broad training in biology and allows specializations through choice of electives. It offers basic preparation for entry-level employment positions, graduate work or an advanced degree in all health-related areas. The combination of required and elective courses needs to equal a minimum of 58 credit hours.

**Introductory Track**
___ BIOL2051 General Biology: Organismal Diversity, 4 hrs
___ BIOL2052 General Biology: Cell Structure and Function, 4 hrs
___ BIOL3100 Evolution, Ecology & the Nature of Science, 3 hrs
___ BIOL3140 Genetics, 4 hrs

**Required Chemistry**
___ CHEM1110 General Chemistry I, 4 hrs
___ CHEM1120 General Chemistry II, 4 hrs

**Required Advanced Chemistry Coursework** (choose one option)
1. ___ CHEM2040 Applied Organic & Biochemistry, 4 hrs
   OR
2. ___ CHEM2210 Organic Chemistry I, 3 hrs
   ___ CHEM2230 Organic Chemistry Lab, 2 hrs

**Required Math** (choose one option)
1. ___ MATH1120 Math for the Biological Sciences, 3 hrs AND
   ___ MATH1130 Trigonometry, 2 hrs
   OR
2. ___ MATH1140 Precalculus, 4 hrs
   OR
3. ___ MATH1420 Calculus I, 4 hrs

**Required Earth Science or Physics** (choose one option)
1. ___ EARTHSCI1300 Intro to Geology, 4 hrs
   AND
   ___ EARTHSCI1320 Earth History, 4 hrs
   OR
2. ___ PHYSICS1511 General Physics I, 4 hrs
   AND
   ___ PHYSICS1512 General Physics II, 4 hrs

**Major Elective Credit Courses** (17-19 hours to total 58)
___ List of biology electives on reverse side
___ Science courses at Iowa Lakeside Laboratory satisfy elective requirements. Check with your advisor for specific information.

Chemistry courses that satisfy elective requirement:
___ CHEM4510 Biochemistry I, 3 hrs
___ CHEM2220 Organic Chemistry II, 3 hrs

**NOTES:**
- Must have a UNI cumulative & UNI major/plan GPA of 2.5, higher, with a grade of C- (1.67), or better in all courses applied to the major.
- A minimum of 7 credits of 4000 level biology electives required: BIOL4xxx --BIOL4198 Independent Study and --CHEM4510 Biochemistry I; do not count toward the 4000 level biology elective requirement.
- At least 4 credits of biology electives at the 4000 level need to be taken at UNI.
- BIOL3101 Anatomy & Physiology I counts as university elective credit, not as a biology major elective.
- Cannot count more than a combined 4 credits toward the biology major elective requirements:
  - BIOL3185 Readings in Biology
  - BIOL3190 Undergraduate Research
  - BIOL4198 Independent Study
- If *CHEM 1130 General Chemistry I-II, 5 hrs, is taken, then 3 additional biology electives are required to reach a 58 credit major.
- 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 Research Emphasis in order for it to reflect on the degree.
3000 & 4000 BIOLOGY COURSE OFFERINGS

BIOL3100 Evolution, Ecology & Nature of Science (Fall/Spring) 3 hrs
BIOL 3102 Anatomy & Physiology II* (Fall/Spring), 4 hrs
BIOL 3106 Vertebrate Anatomy (Fall/Spring), 4 hrs
BIOL 3107 Environmental Physiology (Fall), 3 hrs
BIOL 3108 Vertebrate Histology (Even Springs), 4 hrs
BIOL 3112 Invertebrate Zoology (Spring), 4 hrs
BIOL 3118 Marine Biology (Fall), 3 hrs
BIOL 3120 Plant Diversity and Evolution (Spring), 4 hrs
BIOL 3140 Genetics (Spring/Fall), 4 hrs
BIOL 3147 Cancer and Emerging Infectious Diseases (Spring), 3 hrs
BIOL 3151 General Microbiology (Fall/Spring), 4 hrs
BIOL 3160 Field Zoology of Vertebrates (Spring), 4 hrs
BIOL 3170 Entomology (Even Falls), 3 hrs
BIOL 4105 Wildlife Ecology & Mngmt (Odd Falls), 4 hrs
BIOL 4108 Biodiversity Conservation Policy & Regs (Even Falls), 3 hrs
BIOL 4114 Comparative Animal Physiology# (Even Falls) 4 hrs
BIOL 4116 Neurobiology (Spring), 3 hrs
BIOL 4121 Plant Biotechnology (Odd Falls), 4 hrs
BIOL 4122 Plant Physiology (Spring), 4 hrs
BIOL 4127 Bioinformatics Applications for Biology, (Even Springs), 3hrs
BIOL 4128 Cell Biology# (Spring), 4 hrs
BIOL 4129 Genomics & Proteomics (Even Falls), 3 hrs
BIOL 4137 Vertebrate Physiology# (Odd Falls), 4 hrs
BIOL 4142 Evolutionary Biology (Spring), 3 hrs
BIOL 4144 Virology (Even Springs), 4 hrs
BIOL 4146 Developmental Biology of Animals (Fall/Spring), 4 hrs
BIOL 4150 Immunology (Fall/Spring), 4 hrs
BIOL 4152 Microbial Molecular Bio (Odd Springs), 4 hrs
BIOL 4153 Recombinant DNA Tech (Even Falls), 4 hrs
BIOL 4154 Aquatic Ecology (Fall), 3 hrs
BIOL 4157 Biostatistics (Fall), 3 hrs
BIOL 4164 Mammalogy (Fall), 4 hrs
BIOL 4166 Plant Systematics (Fall), 4 hrs
BIOL 4167 Conservation Biology (Spring), 3 hrs
BIOL 4168 Ecology (Fall), 4 hrs
BIOL 4172 Developmental Plant Anatomy (Fall), 4 hrs
BIOL 4176 Microscopy Methods in Biology, 3 hrs
BIOL 4180 Restoration Ecology (Spring), 4 hrs
BIOL 4198 Independent Study****

Research Associated Credits
BIOL 3185 Readings in Biology,1-3 hrs
BIOL 3189 Seminar, 1 hr
BIOL 3190 Undergraduate Research Biology, 1-3 hrs***

Science courses at Iowa Lakeside Laboratory, lakesidelab.org, satisfy elective requirements. Check with your advisor for specific information.

Full course details at: uni.edu/catalog

NOTES:
1. Prerequisite for 3000 level courses include completion of: BIOL 2052, BIOL 2051, CHEM 1110 and CHEM 1120. All with a with C- or higher
2. Prerequisite for 4000 level courses include junior standing and completion of
   a. Two semester sequence of General Biology and General Chemistry (listed above)
   b. BIOL3100 Evolution, Ecology and Nature of Science and BIOL3140 Genetics. All with a with C- or higher
   c. Courses with # have additional prerequisites. Check course catalog for complete details.
3. * BIOL 3101 A & P I counts as university elective credit. A student must take BIOL 3101 Anatomy and Physiology I OR BIOL 3106 Vertebrate Anatomy and BIOL 3102 Anatomy and Physiology II at UNI for BIOL 3102 to be counted as biology elective credit for the major or minor.
4. ***Undergraduate Research in Biology -- Students must contact faculty members to inquire about available research opportunities
5. The official degree requirements and policies and procedures can be found at: www.uni.edu/catalog
6. Students pursuing a biology major or minor must earn a C- or better in all coursework required for their major and must have a UNI Major/Plan GPA and UNI Cumulative GPA of 2.5 or better at the time of graduation