BIOLOGY, B.S.

120 Overall Credits Required

LIBERAL EDUCATION PROGRAM AND WRITING REQUIREMENTS

Liberal Education Program
Students must complete a comprehensive three-tiered Liberal Education Program (LEP).

View all requirements of the tiers on the Liberal Education Program.

While the choice of courses that fulfill the requirements is generally left up to students, courses in the major and/or cognate may also satisfy LEP requirements. These shared courses are recommended below to fulfill both areas, although the course credits are only counted once towards the 120 credits required for graduation.

Tier 1 - Quantitative Reasoning (select one):
MAT 122 – Precalculus
MAT 150 – Calculus I

Tier 2 – Natural World I: Physical Realm:
CHE 120 – General Chemistry I

Tier 2 – Natural World II: Life and Environment:
BIO 103 – Biology II (‘C’ or better)

Writing Requirements (“W-Courses”)

Three W-courses are required. These may not be taken until after a student has passed ENG 112 — Writing Arguments. W-courses may count toward LEP, major, or cognate requirements, as well as free electives. Course sections that meet this requirement are designated by section numbers ending in “W”.

Transfer students who enter with 60 to 89 credits are required to pass two W-courses, while transfer students who enter with 90 credits or more must pass one W-course.

MAJOR REQUIREMENTS

35 Credits Required

Requirements:
BIO 102 – Biology I (‘C’ or better)
BIO 103 – Biology II (‘C’ or better)
BIO 220 – Genetics (‘C’ or better)

Content Areas
GPA of 2.3 in the following Content Areas

ANATOMY/PHYSIOLOGY
One Entry Level:

- BIO 230 – Plant Anatomy and Morphology
- BIO 231 – Comparative Vertebrate Anatomy
- BIO 235 – Histology
- BIO 250 - Plant Diversity

One Upper Level:

- BIO 301 – Physiology
- BIO 401 – Comparative Physiology
- BIO 420 – Plant Physiology
- BIO 454 – Brain: Anatomy and Transmission

BIODIVERSITY/ECOLOGY/ORGANISMAL BIOLOGY

One Entry Level:

- BIO 202 – Ecology
- BIO 210 – Environmental Biology and Conservation
- BIO 215 - Animal Behavior
- BIO 228 – Vertebrate Zoology
- BIO 229 – Invertebrate Zoology

One Upper Level:

- BIO 327 - Field Natural History (Belize)
- BIO 334 – Microbial Ecology
- BIO 337 – Medically Important Arthropods
- BIO 399 - Mammology
- BIO 427 – Entomology
- BIO 429 – Limnology
- BIO 430 – Marine Biology
- BIO 432 – Mycology
- BIO 438 – Aquatic Entomology
- BIO 440 – Parasitic Infections
- BIO 460 – Paleontology

CELL/MOLECULAR

One Entry Level:

- BIO 205 – Forensic Biology
- BIO 233 – Introductory Microbiology
- BIO 236 - Cell Biology
- BIO 240 – Human Heredity
- BIO 296 - Genomics I

One Upper Level:
• BIO 325 - Immunology and Infection
• BIO 335 – Pathogenic Microbiology
• BIO 360 – Plant Growth and Development
• BIO 386 - Genomics II
• BIO 393 - Bioinformatics
• BIO 435 – Developmental Biology
• BIO 436 – Molecular Biology
• BIO 451 – Tissue Culture
• BIO 466 – Advanced Molecular and Cell Biology
• BIO 467 – Laboratory Course in Biotechnology

One Additional Upper Level Course

Select one additional upper level course from any courses listed in the three upper level content areas above (3-4 credits).
You may also select one course from those listed below, all three of which require special departmental permission.

BIO 497 – In-service Training in Biology (3 cr)
BIO 495 – Senior Thesis (3 cr)
BIO 499 – Independent Study and Research (3 cr)

COGNATE REQUIREMENTS

28 Credits Required

Requirements:

CHE 120 – General Chemistry I
CHE 121 – General Chemistry II
CHE 260 – Organic Chemistry I
MAT 122 or MAT 150 – Precalculus or Calculus I
MAT 221 – Intermediate Applied Statistics

Select one from:

• PHY 200 – General Physics I
  • and PHY 201 – General Physics II
• PHY 230 – Physics for Scientists and Engineers I
  • and PHY 231 – Physics for Scientists and Engineers II

FREE ELECTIVES

Remaining credits to reach Overall Credits Required (listed above).