

The Department of Biology is committed to excellence in instruction, scholarly accomplishment, research, professional service and student success. The Department provides a broad-based undergraduate education in Biology so as to give students the opportunity to pursue a career best-suited to their interests and abilities. Graduates are prepared to enter the workforce or continue their education in graduate or professional school. The Department provides rigorous pre-professional preparation for students seeking careers in biological sciences and health professions.

A – GENERAL EDUCATION CORE – 42 HOURS

Students must fulfill the General Education Core requirements. The courses listed below satisfy both degree requirements and General Education core requirements.

Required

020 - Mathematics – 3 hours

Choose one:

- MATH 1342 Elementary Statistical Methods (or MATH 1387 Honors)
- MATH 1343 Introduction to Biostatistics (or MATH 1388 Honors)

030 - Life and Physical Science – 6 hours

- CHEM 1311 General Chemistry I
- CHEM 1312 General Chemistry II

090 - Integrative and Experiential Learning – 2 hours

- CHEM 1111 General Chemistry I Lab
- CHEM 1112 General Chemistry II Lab

B – MAJOR REQUIREMENTS – 44 HOURS (32 advanced)

1 – Biology Foundation – 23 hours (15 advanced)

- BIOL 1406 General Biology I (or BIOL 1487 Honors)
- BIOL 1407 General Biology II (or BIOL 1488 Honors)
- BIOL 3301 Biological Evolution
- BIOL 3409 Ecology
- BIOL 3413 Genetics
- BIOL 4400 Biological Communication (Capstone)

2 – Biology Electives – 21 hours (17 advanced minimum)

Students must take at least one course from each group representing one of three organizational levels of Biology. Group criteria do not need to be met with advanced hours.

a – Cellular/Molecular

Choose at least one:

- BIOL 3401 General Microbiology
- BIOL 3403 Medical Microbiology and Immunology
- BIOL 3405 Histology
- BIOL 3406 Developmental Mechanisms
- BIOL 3412 Cell Biology
- BIOL 3415 Molecular Biology
- BIOL 4313 Endocrinology
- BIOL 4330 Molecular Evolution
- BIOL 4333 Immunology
- BIOL 4408 Plant Pathology
- BIOL 4413 General Virology
- BIOL 4417 Bacterial Genetics
- BIOL 4418 Electron Microscopy
- BIOL 4421 Biotechnology
- BIOL 4428 Medical Genomics
- CHEM 3303 Biochemistry I

b – Organismal

Choose at least one:

- BIOL 2401 Anatomy and Physiology I
- BIOL 2402 Anatomy and Physiology II
- BIOL 2428 Comparative Vertebrate Anatomy
- BIOL 3310 Neurobiology
- BIOL 3345 Animal Nutrition

BIOL 3407 Comparative Embryology
BIOL 3408 Plant Morphology
BIOL 3311 or 3411 Mammalian Physiology
BIOL 3414 Invertebrate Zoology
BIOL 4319 Medical Entomology
BIOL 4362 Neuroscience II: System, Developmental, and Disorders
BIOL 4402 Marine Zoology
BIOL 4404 Ichthyology
BIOL 4405 Plant Physiology
BIOL 4407 Animal Parasitology
BIOL 4409 Herpetology
BIOL 4410 Marine Botany
BIOL 4412 Ornithology
BIOL 4414 Plant Taxonomy
BIOL 4415 Entomology
BIOL 4416 Mammalogy
BIOL 4419 Aquatic Entomology
BIOL 4420 Plant Anatomy
BIOL 4422 Neurobiology Methods

c – Ecological/Environmental

Choose at least one:

BIOL 2310 Marine Processes and Ecosystem Dynamics
BIOL 3404 Conservation Biology
BIOL 3420 Environmental Biology
BIOL 4316 Environmental Toxicology
BIOL 4317 Disease Epidemiology
BIOL 4318 Ethnobotany
BIOL 4388 Global Change Ecology
BIOL 4389 Geographical Information Systems in Biology
BIOL 4403 Introduction to Remote Sensing Technology
BIOL 4411 Ecological Physiology of Animals
BIOL 4424 Microbial Ecology
BIOL 4426 Marine Ecology
BIOL 4427 Marine Animal Field Studies
BIOL 4429 Agroecology
BIOL 4432 Animal Behavior

C – SUPPORT COURSES – 4 HOURS

CHEM 2123 Organic Chemistry I Lab
CHEM 2323 Organic Chemistry I

D – FREE ELECTIVES – 12 HOURS

Advanced hours will vary to meet 42 advanced hour requirement.

E – MINOR – 18 HOURS (6 advanced)

TOTAL CREDIT HOURS FOR GRADUATION – 120 HOURS

TOTAL ADVANCED HOURS – 42 HOURS

ADMISSION, PROGRESSION, AND GRADUATION REQUIREMENTS, if applicable:

Admission requirements

Admission requirements to this program: BIOL 1406 (or BIOL 1487 Honors), BIOL 1407 (or BIOL 1488 Honors), and CHEM 1311/CHEM 1111 with a 'C' or better grade in all of these courses and Department approval.

Graduation requirements

1. Minimum 44 credit hours in Biology and 2.50 Biology GPA; At least 32 upper division hours in Biology.