

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 Sciences – 6 hours

CHEM 1311 General Chemistry I

CHEM 1312 General Chemistry II

040 - Language, Philosophy and Culture – 3 hours

Choose from:

PHIL 1301 Introduction to Philosophy (or PHIL 1387 Honors)

PHIL 1366 Philosophy and History of Science and Technology

090 - Integrative and Experiential Learning – 2 hours

CHEM 1111 General Chemistry I Lab

CHEM 1112 General Chemistry II Lab

B – MAJOR REQUIREMENTS – 58 HOURS (24 advanced minimum)

1 – Biology Core – 42 hours (18 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)

CHEM 2323 Organic Chemistry I

CHEM 2123 Organic Chemistry I Lab

CHEM 2325 Organic Chemistry II

CHEM 2125 Organic Chemistry II Lab

CHEM 3303 Biochemistry

PHYS 1401 General Physics I

PHYS 1402 General Physics II

2 – Biology Electives – 16 hours (6 advanced minimum)

a – Cell/Molecular Course

Choose at least one:

BIOL 3401 General Microbiology

BIOL 3403 Medical Microbiology and Immunology

BIOL 3412 Cell Biology

BIOL 3415 Molecular Biology

BIOL 4313 Endocrinology

BIOL 4330 Molecular Evolution

BIOL 4333 Immunology

BIOL 4361 Neuroscience I: Cellular and Molecular

BIOL 4413 General Virology

BIOL 4417 Bacterial Genetics

BIOL 4418 Electron Microscopy

BIOL 4421 Biotechnology

b – Developmental/Morphology

Choose at least one:

BIOL 2428 Comparative Vertebrate Anatomy
BIOL 3405 Histology
BIOL 3406 Developmental Mechanisms
BIOL 3407 Comparative Embryology
BIOL 3408 Plant Morphology
BIOL 4420 Plant Anatomy

c – Organismal/Environmental

Choose at least one:

BIOL 3404 Conservation Biology
BIOL 3414 Invertebrate Zoology
BIOL 4316 Environmental Toxicology
BIOL 4318 Ethnobotany
BIOL 4319 Medical Entomology
BIOL 4388 Global Change Ecology
BIOL 4402 Marine Zoology
BIOL 4403 Introduction to Remote Sensing Technology
BIOL 4404 Ichthyology
BIOL 4407 Animal Parasitology
BIOL 4408 Plant Pathology
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 4424 Microbial Ecology
BIOL 4426 Marine Ecology
BIOL 4427 Marine Animal Field Studies
BIOL 4432 Animal Behavior

d – Physiology

Choose at least one:

BIOL 1322 Human Nutrition
BIOL 2401 Anatomy and Physiology I
BIOL 2402 Anatomy and Physiology II
BIOL 3310 Neurobiology
BIOL 3345 Animal Nutrition
BIOL 3411 Mammalian Physiology
BIOL 4317 Disease Epidemiology
BIOL 4362 Neuroscience II: System, Developmental, and Disorders
BIOL 4405 Plant Physiology
BIOL 4411 Ecological Physiology of Animals
BIOL 4422 Neurobiology Methods

C – SUPPORT COURSES – 6 HOURS

PSYC 2301 General Psychology
SOC 1301 Introduction to Sociology

D – FREE ELECTIVES – 14 HOURS (8 advanced minimum)

Pre-medical/Pre-dental/Pre-optometry/Pre-veterinary students are strongly encouraged to take CHEM 2325/CHEM 2125 Organic Chemistry II, CHEM 3303 Biochemistry, and PHYS 1402 General Physics II.

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

In addition to the graduation requirements listed in the UTRGV 2015-2017 Undergraduate Catalog, demonstration of proficiency in a language other than English is required at the undergraduate level equivalent to a minimum of six credit hours. Proficiency can be demonstrated by a college credit exam, a placement test approved through the UTRGV Department of Writing and Language Studies, and/or up to six credit hours of college-level language coursework.