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

0.20 - Mathematics – 3 hours
Choose one:
- MATH 1342 Elementary Statistical Methods (or MATH 1387 Honors)
- MATH 1343 Introduction to Biostatistics (or MATH 1388 Honors)

0.30 - Life and Physical Sciences – 6 hours
- CHEM 1311 General Chemistry I
- CHEM 1312 General Chemistry II

0.40 - Language, Philosophy and Culture – 3 hours
Choose from:
- PHIL 1300 Critical Thinking
- PHIL 1301 Introduction to Philosophy (or PHIL 1387 Honors)
- PHIL 1366 Philosophy and History of Science and Technology

0.90 - Integrative and Experiential Learning – 2 hours
- CHEM 1111 General Chemistry I Lab
- CHEM 1112 General Chemistry II Lab

B – MAJOR REQUIREMENTS – 58 HOURS (28 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 I
- PHYS 1401 General Physics I
- PHYS 1402 General Physics II

2 – Biology Electives – 16 hours (10 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
BIOL 4428 Medical Genomics

**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 2310 Marine Processes and Ecosystem Dynamics
- BIOL 3404 Conservation Biology
- BIOL 3414 Invertebrate Zoology
- BIOL 3420 Environmental Biology
- BIOL 4316 Environmental Toxicology
- BIOL 4318 Ethnobotany
- BIOL 4319 Medical Entomology
- BIOL 4388 Global Change Ecology
- BIOL 4389 Geographical Information Systems in Biology
- 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 4423 Wildlife Ecology and Management
- 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 3311 or 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
   SOCI 1301 Introduction to Sociology

D – FREE ELECTIVES – 14 HOURS
   Advanced hours will vary to meet 42 advanced hour requirement. MATH 1314 or 1414 or passing the Mathematics Exemption Test administered by the School of Mathematical and Statistical Sciences is required to enroll in PHYS 1401.

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. A 2.5 minimum GPA in Major Requirements is required for graduation.
   2. In addition to the graduation requirements listed in the UTRGV 2018-2019 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.