The School of Earth, Environmental, and Marine Sciences offers a B.S. in Marine Biology, which is designed to prepare students who are seeking a career or graduate studies in marine biology and related marine science disciplines. Undergraduates in this major will develop an understanding of the biology of marine organisms and the biological and physical processes that affect these organisms, their populations, and their coastal and oceanic ecosystems. The curriculum takes full advantage of the Rio Grande Valley's unique physical location at the intersection of temperate and tropical climatic divides, and proximity to the Gulf of Mexico. Unifying laboratory/field courses with the unique environments of South Texas directly engage students in the discovery process and in analyzing and interpreting data. The Marine Biology program requires 120 hours of coursework including a major-specific marine biology core and supporting courses aimed at interrelating the principles of physics, geology and geophysics, mathematics, chemistry, and biology to the marine environment. Upper-level electives include Coral Reef Ecology, Marine Zoology, Ichthyology, Marine Animal Field Studies, as well as supervised independent research courses.

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

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

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 (47 advanced)

1 – Marine Biology Core – 37 hours (26 advanced)

BIOL 1406 General Biology I (or BIOL 1487 Honors)
BIOL 1407 General Biology II (or BIOL 1488 Honors)
MARS 2310 Marine Processes and Ecosystems Dynamics (or BIOL 2310)
MARS 3320 Marine Biogeochemistry (or BIOL 3320)
MARS 3430 Field Methods and Analysis in Marine Biology (or BIOL 3430)
BIOL 3413 Genetics
Choose one:
BIOL 3415 Molecular Biology
BIOL 3412 Cell Biology
BIOL 3301 Biological Evolution
BIOL 3409 Ecology
MARS 4401 Marine Biology Seminar (Capstone) (or BIOL 4401)

2 – Marine Biology Electives – 17 hours (17 advanced)

Choose from:
BIOL 3414 Invertebrate Zoology
BIOL 4388 Global Change Ecology
BIOL 4403 Introduction to Remote Sensing Technology
BIOL 4404 Ichthyology
GEOL 3408 Introduction to Geographic Information Systems
MARS 4199 Research Problems in Marine Biology (or BIOL 4199)
MARS 4399 Research Problems in Marine Biology (or BIOL 4399)
MARS 3416 Coral Reef Ecology (or BIOL 3416)
MARS 4402 Marine Zoology (or BIOL 4402)
MARS 4410 Marine Botany (or BIOL 4410)
MARS 4426 Marine Ecology (or BIOL 4426)
MARS 4427 Marine Animal Field Studies (or BIOL 4427)
MARS 4430 Coastal Ecology (or BIOL 4430)

3 – Biology Electives – 4 hours (4 advanced)

Choose 4 hours of advanced Biology.

C – SUPPORT COURSES – 20 HOURS (4 advanced)

CHEM 2323 Organic Chemistry I
CHEM 2123 Organic Chemistry I Lab
CHEM 2325 Organic Chemistry II
CHEM 2125 Organic Chemistry II Lab
PHYS 1401 General Physics I
PHYS 1402 General Physics II
ENVR 3405 Oceanography

TOTAL CREDIT HOURS FOR GRADUATION – 120 HOURS
TOTAL ADVANCED HOURS – 51 HOURS

ADMISSION, PROGRESSION, AND GRADUATION REQUIREMENTS, if applicable:

Graduation requirements

In addition to the graduation requirements listed in the UTRGV 2017-2018 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.