

Degree Type – Bachelor of Science (BS)
Degree Title – Environmental Science

The Interdisciplinary Bachelor of Science degree in Environmental Science prepares graduates for careers at local, state and federal government agencies, non-profit organizations, and environmental consulting firms. Additionally, graduates of this program are prepared to continue onto graduate studies in order to pursue research and scholarship opportunities. The program core focuses on key environmental issues while the restricted electives allow the students to choose to focus on areas of interest to the individual student.

STUDENT LEARNING OUTCOMES:

1. **The environmental sciences graduate can demonstrate the use of analytical and technical tools used in finding solutions to environmental sciences research questions.**
2. **The environmental sciences graduate can apply professional evaluative methodologies and appropriate environmental laws and regulations for impact analyses and environmental problem solving.**
3. **The environmental sciences major will develop and enhance the following cognitive skills:**
 - a. **Explain and apply fundamental environmental sciences theories;**
 - b. **Identify multiple dimensions of environmental sciences issues; and**
 - c. **Understand and apply knowledge of regulations to environmental issues.**

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

Mathematics – 3 hours

MATH 2413 Calculus I (or MATH 2487 Honors) three-hour lecture

Life and Physical Sciences – 6 hours

GEOL 1403 Physical Geology three-hour lecture

GEOL 1404 Historical Geology three-hour lecture

Integrative and Experiential Learning – 2 hours

GEOL 1403 Physical Geology one-hour lab

GEOL 1404 Historical Geology one-hour lab

B – MAJOR REQUIREMENTS – 46 HOURS (38 advanced)

1 – Environmental Science Core – 26 hours (18 advanced)

ENVR 1401 Introduction to Environmental Science I

ENVR 1402 Introduction to Environmental Science II

ENVR 3301 Natural Resources Conservation

ENVR 3302 Environmental Ethics

ENVR 3303 Research Methodology and Data Analysis in Environmental Sciences

ENVR 4301 Environmental Regulations

ENVR 4302 Environmental Impact Analysis

ENVR 4303 Environmental Sciences Research Project

2 – Advanced Electives – 20 hours (20 advanced)

Students may choose any advanced electives in BIOL, CHEM, ENVR, or GEOL. List of recommended courses available within Department. Recommended courses include:

BIOL 3409 Ecology
BIOL 3414 Invertebrate Zoology
BIOL 4402 Marine Zoology
BIOL 4403 Introduction to Remote Sensing Technology
BIOL 4404 Ichthyology
BIOL 4410 Marine Botany
BIOL 4414 Plant Taxonomy
BIOL 4409 Herpetology
BIOL 4316 Environmental Toxicology
BIOL 4429 Agroecology
BIOL 4430 Coastal Ecology
BIOL 4412 Ornithology
BIOL 4370 Special Topics II
BIOL 4170 Laboratory Topics in Biology
BIOL 3404 Conservation Biology
BIOL 4415 Entomology
BIOL 4416 Mammalogy
BIOL 4419 Aquatic Entomology
BIOL 4388 Global Change Ecology
BIOL 4423 Wildlife Ecology and Management
CHEM 3303 Biochemistry I
CHEM 3103 Biochemistry I Lab
CHEM 3304 Physical Chemistry I
CHEM 3104 Physical Chemistry I Laboratory
CHEM 3305 Physical Chemistry II
CHEM 3105 Physical Chemistry II Laboratory
CHEM 4304 Instrumental Analysis
CHEM 4104 Instrumental Lab
CHEM 3401 Environmental Chemistry
GEOL 3408 Introduction to Geographic Information Systems
GEOL 3402 Hydrologic Systems
GEOL 3401 Geomorphology
GEOL 4302 Environmental Geology
GEOL 4401 Advanced Geographic Information Systems
GEOL 4403 Sedimentology and Stratigraphy
GEOL 4404 Coastal Geology
ENVR 3405 Oceanography
ENVR 4304 Environmental Sciences Internship
ENVR 4370 Topics in Environmental Sciences
ENVR 4170 Topics in Environmental Sciences Lab

C – ELECTIVES – 32 HOURS (4 advanced)

1 – Support Courses – 27 hours

BIOL 1406 General Biology I (or BIOL 1487 Honors Biology I)
BIOL 1407 General Biology II (or BIOL 1488 Honors Biology II)
CHEM 1311/1111 General Chemistry I/Lab
CHEM 1312/1112 General Chemistry II/Lab
PHYS 1401 General Physics I
PHYS 1402 General Physics II
MATH 1342 Elementary Statistical Methods (or MATH 1387 Honors)

2 – Mathematics – 1 hour

MATH 2413 Calculus I (or MATH 2487 Honors) one-hour lecture

2 – Free Electives – 4 hours (4 advanced)

TOTAL CREDIT HOURS FOR GRADUATION – 120 HOURS

TOTAL ADVANCED HOURS – 42 HOURS

ADMISSION, PROGRESSION, AND GRADUATION REQUIREMENTS, if applicable:

Graduation requirements

1. Minimum of 73 hours in Environmental Sciences major requirements restricted Environmental Sciences electives and support courses with an overall GPA of 2.5.
2. 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.