

Environmental Toxicology, Ph.D.

About the Environmental Toxicology Doctoral Program

The Department of Environmental Toxicology offers a graduate program within the College of Arts and Sciences as well as fixed and variable credit courses for undergraduates. The courses are designed to provide undergraduate students the opportunity to learn about and conduct scientific research in environmental toxicology. Because of the multidisciplinary nature of environmental toxicology, prospective students should contact the Graduate Program Coordinator to discuss prerequisites and prior training. Generally, a strong background in the natural, physical, or health sciences will provide the necessary preparation. Students interested in pursuing a degree must complete the online application to the [Graduate School](#). Interested students should contact faculty within the department.

The Department of Environmental Toxicology integrates the efforts of Texas Tech University, the School of Law, and the Texas Tech University Health Sciences Center in a joint venture to assess the impacts of toxic chemicals and other stressors on the natural environment. Attracting graduate students at both the master's and doctoral level, The Department of Environmental Toxicology includes faculty with backgrounds in biological sciences, medicine, epidemiology, biostatistics, engineering, chemistry, computer science, law, mathematics, pharmacology, physiology, and wildlife biology.

The Ph.D. program (72 hours) is composed of coursework emphasizing the principles of toxicology, the environmental fate of chemicals, statistical approaches to study design, data handling, and data analysis, and seminars in environmental toxicology. Supplemental coursework, research, and dissertation hours are chosen by the student with the guidance of their committee, allowing for focus on the student's particular research emphasis. Students pursuing this degree must perform an original research project, prepare a written dissertation, and defend the work in a public defense.

Ph.D. Core Courses

- ENTX 6100 – Graduate Seminar: Stats Lab (1)
- ENTX 6105 – Introductory Seminar in Environmental Toxicology (1)
- ENTX 6325 – Principles of Toxicology I (3)
- ENTX 6326 – Principles of Toxicology II (3)
- ENTX 6385 – Statistical Applications in Environmental Toxicology (3)
- ENTX 6445 – Chemical Sources and Fates in Environmental Systems (4)

Ph.D. Laboratory-Based Course Requirement (6 hours, any combination of lecture and lab)

- ENTX 6327 – Molecular Toxicology (3)
- ENTX 6328 – Molecular Methods in the Toxicology Laboratory (3)
- ENTX 6351 – Analytical Toxicology Lecture (3)
- ENTX 6352 – Analytical Toxicology Laboratory (3)

Ph.D. Seminars (6 hours)

- ENTX 6115 – Seminars (6)

Ph.D. Broadening Courses (6 hours)

- ENTX 6300 – Advanced Topics in Environmental Toxicology (3)
- ENTX 6312 – Biological Threats in the Environment (3)
- ENTX 6314 – Chemical Warfare and Protective Countermeasures (3)

- ENTX 6365 – Fundamentals of Aquatic Ecotoxicology (3)
- ENTX 6371 – Procedures and Techniques in Ecological Risk Assessment (3)

Courses that were not taken to fulfill the Laboratory–Based Course Requirement:

- ENTX 6327 – Molecular Toxicology (3)
- ENTX 6328 – Molecular Methods in the Toxicology Laboratory (3)
- ENTX 6351 – Analytical Toxicology Lecture (3)
- ENTX 6352 – Analytical Toxicology Laboratory (3)

Ph.D. Research (hours after core, laboratory-based courses, seminars, and broadening to reach 72hrs)

- ENTX 7000 – Research (varies)

Ph.D. Dissertation (12 hours)

ENTX 8000 – Dissertation (12)