Environmental Toxicology

Department Information

Environmental Toxicology website
https://www.southalabama.edu/colleges/graduateschool/etox/

The University of South Alabama offers an interdisciplinary Masters program in Environmental Toxicology. Students focus on understanding how toxins and/or pollutants affect the health of people, food-webs, and ecosystems. Projects will assess the fate, effects and risks of natural toxins and pollutants using a multidisciplinary approach that incorporates toxicology, environmental chemistry, risk assessment, and ecology.
Students in this program will learn to:

- evaluate the impact of specific toxins, pollutants, and/or mixtures in the environment
- perform laboratory and/or field studies to monitor environmental and evaluate the impacts of toxins/pollutants
- optimize and/or develop field or laboratory methods to identify and evaluate toxic substances in biota and in the environment
- evaluate strategies to prevent, mitigate, and/or control and manage toxic substances
- evaluate policies and regulations used in risk analysis and risk management

Graduates from this program will be able to seek opportunities across multiple employment sectors including academic research, State and Federal Government research and policy, industry, non-governmental organizations, and private consulting and/or environmental monitoring. Alternatively, students may continue their education by pursuing a Ph.D. degree in Environmental Toxicology or related areas (e.g., Marine Sciences, Biology, Biomedical Sciences). In addition, these graduates will be qualified for jobs requiring M.S. degrees in their original areas of concentration.

Minimum Requirements For Admission

Students applying to this program must fulfill all the requirements for admission specified by the Graduate School. Additional requirements include:

- B.S./B.A. degree from an accredited four-year college or university. Te program is designed for graduates holding baccalaureate degrees in Biology, Biomedical Sciences, Chemistry, Engineering or related fields.
- An undergraduate GPA of 3.00 or above is required.
- The Graduate Record Exam (GRE) will be required and will be considered among the admission criteria. A minimum score of 300 combined on the verbal and quantitative subtests.
- In addition, students applying to this program must have completed the following undergraduate courses: Biology (2 semesters); Statistics (1 semester); Calculus (1 semester); Organic Chemistry (2 semesters); Biochemistry.
- It is recommended (but not required) that students applying to the program have completed at least 6 credit hours of undergraduate Biochemistry. Those students who have only taken the minimum 3 hours of undergraduate biochemistry will have to include an additional 3 hours of graduate Biochemistry among the elective courses to complete the program.

The applicant will also be required to submit:

1. A completed application including a 1-2 page statement indicating the students interests and professional goals
2. Official transcripts from all undergraduate institutions attended
3. At least two professional letters of recommendation with current contact information
4. Official scores from the GRE

Assessment of credentials will be supplemented by evaluation of letters of recommendation and the educational background of the student. Foreign applicants must meet all University entrance requirements and meet a minimum TOEFL score of 71 (or equivalent). More details for foreign applicants can be found here: https://www.southalabama.edu/departments/international/requirements-deadline.html

To ensure compatibility between the student's research interests and faculty expertise, particular attention will be given to the written statement of interest from applicants. A University faculty member will be asked to act as a "mentor" for the applicant based on the statement of interest, and if necessary, a follow-up interview. Through this process, the student's interests will be

matched to the expertise available at the University. Where possible student's should contact potential mentors in advance or work with the graduate coordinator to find a potential mentor when applying to the program.

Fellowships And Assistantships

The Graduate School offers a limited number of competitive research and/or teaching assistantships to students in the Environmental Toxicology program at the University of South Alabama. These include tuition remission and waiver of out-of-state fees. Additional research assistantships may be possible through extramural grants and contracts t

Deadline For Applications To The Environmental Toxicology Program

Applications are accepted in the Fall semester in each year by the deadlines indicated in the University of South Alabama Bulletin. Early applications and inquiries are welcomed to assist in identification of potential mentors.

Areas Of Study

Environmental Toxicology (MS)

Courses

Environmental Toxicology (EXT) (EXT)

EXT 515 Environmental Toxicology 4 cr
Introduction to the scientific and technical principles of toxicological processes in the context of the ecosystem. Students will understand both the types of major environmental toxicants and how to properly evaluate their toxicity and factors that influence toxicity. Students will recognize and coherently formulate risk assessment and by using the tools and techniques acquired, develop and communicate proposals for remedy.
Pre-requisite: (BLY 301 Minimum Grade of C and BLY 302 Minimum Grade of C) and (CH 201 Minimum Grade of C and CH 202 Minimum Grade of C) and (CH 540 Minimum Grade of B and CH 541 Minimum Grade of B).

EXT 594 Directed Studies 1 TO 6 cr
Students pursue a research project under the direction of a graduate faculty member. The course requires special permission from the program director, to make sure that the study is in line with the curriculum that the student is pursuing.

EXT 599 Research Thesis 1 TO 6 cr
Research project directed by a member of the graduate faculty. Prerequisite: Approval of research prospectus by the graduate committee.