Ph.D. in Toxicology
Updated Curriculum Fall 2017

Core Toxicology Requirement for all students: 9 hours
EHSC 7490  Principles of Toxicology  3 hours
BIOS 7020 or Introductory Biostatistics II  3 hours
FANR 6750/6750D (or equivalent)

and either:
VPHY 8960 (Molecular Toxicology) or FISH 8350 (Fundamentals of Ecotoxicology)  3 hours

Areas of Emphasis for the ITP: 9 hours from Ecological Toxicology or Mechanistic Toxicology

Students may choose from one of the 2 areas of emphasis. To fulfill the Toxicology requirement, a student must take at least 9 credit hours (usually three courses) from your chosen area of emphasis listed below. According to the Graduate School, a doctoral program of study should consist of 16 or more hours of 8000- and 9000-level courses, exclusive of 9000 (research) or 9300 (dissertation writing). Therefore, the additional required 4+ credit hours may come from either of the areas of emphasis listed below or from any related area approved by your Major Advisor and Committee.

Ecological Toxicology. Faculty in this emphasis area are primarily focused on understanding the effects and influence of xenobiotics on the environment and organisms that live in the environment. Using a wide range of scientific methods, faculty are involved with species ranging from black flies, fish, amphibians, daphnia, bacteria, mussels, crocodiles and birds.

- Intro Biostats I  BIOS 7010  3 hours
- Fundamental Env. Health Sci  EHSC 7010  3 hours
- Advanced Air Quality  EHSC 7080  3 hours
- Global Environmental Health  EHSC 7410  3 hours
- Water Quality  EHSC 7650  3 hours
- Advanced Topics in EHS  EHSC 8010  3 hours
- Chemical and Microbial Risk Assessment  EHSC 8110  3 hours
- Cancer Etiology and Prevention  EHSC 8210  3 hours
- Biomarkers  EHSC 8250  3 hours
- Aquatic Micro Health  EHSC 8310  3 hours
- Occupational & Env Diseases  EHSC 8400  3 hours
- Genome Technologies  EHSC 8450  3 hours
- Environmental Genomics  EHSC 8460/L  3 hours
- Developmental & Reproductive Tox  EHSC 8550  3 hours
- Quantitative Ecological Toxicology  EHSC 8630  4 hours
- Advanced Environmental Chemistry  EHSC 8650  3 hours
- Experimental Design (Statistics)  FANR 6750  3 hours
- Ecotoxicology (Not Grad Only)  FISH (EHSC) 6600  3 hours
- Fundamentals of Ecotoxicology  FISH 8350  3 hours
- Contemporary Concepts in PK  PHRM 8270  3 hours
- Organ Systems Toxicology  PHRM 8940  4 hours
- Design of Experiments for Research Workers  STAT 8200  3 hours
- Immunotoxicology  VBDI 8200  2 hours
- Cell Pathology  VPAT 8020  4 hours
- Principles of Physiology 1*  VPHY 7111  4 hours
- Principles of Physiology 2* VPHY 7112 3 hours
- Mammalian Cell Physiology VPHY 8010 3 hours
- Neurophysiology VPHY 8400 3 hours
- Molecular Toxicology VPHY 8960 3 hours

**Mechanistic Toxicology.** Faculty in this emphasis area have research interests in understanding the details of how xenobiotics interact with mammalian and non-mammalian species at the level of DNA, proteins, signaling pathways, cells and or even organs. A large number of tools or research methods exist to study mechanisms of action of chemicals and pathogens on biological systems.

- Intro Biostats I BIOS 7010 3 hours
- Occupational Hygiene and Safety EHSC 7150/L 3 hours
- Cancer Etiology and Prevention EHSC 8210 3 hours
- Biomarkers EHSC 8250 3 hours
- Occupational & Env Diseases EHSC 8400 3 hours
- Genome Technologies EHSC 8450 3 hours
- Developmental & Reproductive Tox EHSC 8550 3 hours
- Experimental Design (Statistics) FANR 6750 3 hours
- Ecotoxicology (Not Grad Only) FISH (EHSC) 6600 3 hours
- Fundamentals of Ecotoxicology FISH 8350 3 hours
- Contemporary Concepts in PK PHRM 8270 3 hours
- Organ Systems Toxicology PHRM 8940 4 hours
- Design of Experiments for Research Workers STAT 8200 3 hours
- Immunotoxicology VPAT 8020 4 hours
- Cell Pathology VPAT 8020 4 hours
- Principles of Physiology 1* VPHY 7111 4 hours
- Principles of Physiology 2* VPHY 7112 3 hours
- Mammalian Cell Physiology VPHY 8010 3 hours
- Neurophysiology VPHY 8400 3 hours
- Molecular Toxicology VPHY 8960 3 hours

*VPHY 7111/7112 are offered in series covering different body systems; students may take one or both in the series, however, only one course can be used towards the emphasis requirement.

**Research/Writing: 3 hours**  
Departmental Prefix 9300 3 hours

Minimum hours required: 30 hours

**Additional Graduate School Requirements:**

**Doctoral Degrees.** All courses on the program of study must fall within a six-year time limit. The six-year limit begins with the semester the student was admitted into the program and registered for courses and ends with the last semester before the beginning of the sixth year. For the Doctor of Philosophy degree this program of study must carry a minimum of 30 hours of course work, three hours of which must be dissertation writing (9300). The doctoral program of study for a student who bypasses the master's degree must contain a minimum of 16 hours of 8000- or 9000-level courses and four additional hours of University of Georgia courses open only to graduate students. Courses not allowed on a program of study are directed study courses, 9005 (Graduate Seminar), GRSC 7770, GRSC 9270, and ELAN 7768/7769.