

# TOXICOLOGY (TOXC)

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## **TOXC 423. Developmental Toxicology and Teratology. 3 Credits.**

Emphasizes topics of current research interest relative to the genesis of environmentally caused and genetically based birth defects. One two-hour session per week (evening).

**Grading status:** Letter grade

**Same as:** CBIO 423.

## **TOXC 442. Biochemical Toxicology. 3 Credits.**

Required preparation, one course in biochemistry. Biochemical actions of toxicants and assessment of cellular damage by biochemical measurements. Three lecture hours per week.

**Requisites:** Prerequisite, CHEM 430; permission of the instructor for students lacking the prerequisites.

**Grading status:** Letter grade

**Same as:** ENVR 442, BIOC 442.

## **TOXC 701. Current Topics in Toxicology. 1 Credit.**

In this course, we will read, discuss and present primary research articles, from various research groups, in order to interpret the true meaning of recent scientific findings in the field of toxicology. A general understanding of Biology, Chemistry and Human Health is required.

**Grading status:** Letter grade.

## **TOXC 702. Principles of Pharmacology and Physiology. 3 Credits.**

Introduces students to the major areas of pharmacology and physiology and serves as a basis for more advanced courses. Three lecture hours a week.

**Requisites:** Prerequisite, CHEM 430; permission of the instructor for students lacking the prerequisite.

**Grading status:** Letter grade

**Same as:** PHCO 702.

## **TOXC 707. Advanced Toxicology. 3 Credits.**

Cellular and physiological basis of toxicity of environmental chemicals, with emphasis on inhalation toxicology, developmental toxicology, immunotoxicology, radiation toxicology, renal toxicology, and neurotoxicology. Three lecture hours per week.

**Requisites:** Prerequisite, PHCO 702; permission of the instructor for students lacking the prerequisite.

**Grading status:** Letter grade

**Same as:** ENVR 707, PHCO 707.

## **TOXC 721. Toxicology Seminar II. 1 Credit.**

Student-conducted presentations and discussions of recent advances in toxicology; emphasis on critical evaluation of published investigations and on organization and oral delivery of presentations. One hour per week.

**Grading status:** Letter grade.

## **TOXC 722. Toxicology Seminar III. 1 Credit.**

Presentations by outside invited speakers, local faculty, advanced graduate students, and postdoctoral trainees. Topics will cover all areas of research in toxicology. One hour per week.

**Grading status:** Letter grade

**Same as:** ENVR 722.

## **TOXC 735. Regulatory Toxicology-Interacting with regulatory agencies & approval for drug, device, and chemical. 3 Credits.**

Regulatory agency fundamentals, regulatory process for drug, medical device, cosmetic and agrochemical products. Industry, regulatory agency representatives and consultants will be invited to speak directly about their regulatory policies, challenges, and expectations. Students will develop and present a regulatory submission package as part of a group project.

**Grading status:** Letter grade

**Same as:** GRAD 735.

## **TOXC 760. Toxicokinetics. 3 Credits.**

A quantitative examination of the time course of absorption, distribution, metabolism, excretion, and biologic effects of agents of toxicologic interest. Three lecture hours per week.

**Grading status:** Letter grade.

## **TOXC 792. Seminar in Carcinogenesis. 2 Credits.**

Permission of the instructor. Survey of classical and current literature on selected critical issues in carcinogenesis. Students discuss experimental methods and observations as well as theories and generalizations. Two seminar hours a week.

**Grading status:** Letter grade

**Same as:** PATH 792.

## **TOXC 821. Scientific Writing. 1 Credit.**

Doctoral candidacy in toxicology required. Workshops on scientific writing with special emphasis on fellowship applications and the doctoral research proposal. Students work on several written assignments and are expected complete a draft of their proposals by the end of the semester.

**Grading status:** Letter grade.

## **TOXC 901. Research in Toxicology. 3 Credits.**

May be repeated. Students register in this course as they formulate their doctoral research projects.

**Repeat rules:** May be repeated for credit.

**Grading status:** Letter grade.

## **TOXC 992. Master's (Non-Thesis). 3 Credits.**

Students acquire practical experience through an internship program at a non-academic institution where knowledge in toxicology is applied toward its mission. They subsequently prepare a capstone monograph (thesis substitute) that reports on their individualized experience, a requirement for the MPS in Toxicology.

**Requisites:** Prerequisites, TOXC 442 and TOXC 707.

**Repeat rules:** May be repeated for credit.

**Grading status:** Letter grade.

## **TOXC 993. Master's Research and Thesis. 3 Credits.**

May be repeated. Hours and credits to be arranged.

**Repeat rules:** May be repeated for credit.

## **TOXC 994. Doctoral Research and Dissertation. 3 Credits.**

May be repeated. Hours and credits to be arranged.

**Repeat rules:** May be repeated for credit.