

CHEMICAL AND ENVIRONMENTAL TOXICOLOGY (TOX)

TOX 8156 Principles of Toxicology (3 units)

The basic theorems of toxicology with examples of current research problems. The concepts of exposure, hazard and risk assessment will be defined and illustrated with experimental material from some of the more dynamic areas of modern research. This course is equivalent to BIOL 6402 at Carleton University.

Course Component: Lecture

TOX 8157 Chemical Toxicology (3 units)

Advanced course in chemical toxicology dealing with both chemical hazards and exposure. Overview of empirical data relating to the toxicity of various classes of chemicals for test organisms, followed by study of toxicity at the cellular level, including studies of interactions between toxic substances and enzymatic systems. Data applicable to the interpretation and monitoring of WHMIS health regulations. Initial events in enzyme induction and mutagenesis. Study of predictive capabilities in the areas of structure-activity relationships and mechanisms of enzyme induction, followed by assessment of mechanisms of exposure to toxic chemicals.

Course Component: Lecture

TOX 9104 Ecotoxicology (3 units)

Selected topics and advances in ecotoxicology with emphasis on the biological effects of contaminants. The potential for biotic perturbation resulting from chronic and acute exposure of ecosystems to selected toxicants will be covered along with the methods pesticide, herbicide and pollutant residue analysis and the concept of bound residues. This course is equivalent to BIOL 6403 at Carleton University.

Course Component: Lecture

TOX 9105 Seminar in Toxicology (3 units)

A one-session course in seminar format highlighting current topics in toxicology. The student will present a seminar and submit a report on the seminar topic. Student, faculty and invited seminar speakers.

Course Component: Seminar

TOX 9106 Genetic Toxicology (3 units)

Topics in mutagenesis and DNA repair, including spontaneous and induced mutagenesis, genetic toxicology testing, the genetics and biochemistry of replication, DNA repair and recombination, and the role of mutagens in the development of genetic disease and cancer. This course is equivalent to BIOL 6406 at Carleton University.

Course Component: Lecture