

# TOXICOLOGY

The collaborative specialization is the focal point for graduate teaching and research in toxicology. Students wishing to undertake graduate studies at the masters or doctoral level with emphasis on toxicology will be admitted by a participating department and will register in both the participating program and in the collaborative specialization. The participating programs include Animal Biosciences, Biomedical Sciences, Chemistry, Food Safety and Quality Assurance, Human Health and Nutritional Sciences, Integrative Biology, Molecular and Cellular Biology, Pathobiology, Plant Agriculture and Environmental Sciences.

## Administrative Staff

### Director and Graduate Program Coordinator

Dr. Richard Manderville (SCIE 3243, Ext. 53963)

rmanderv@uoguelph.ca

### Graduate Program Assistant

Lisa O'Dwyer (SCIE 2513, Ext. 53044)

chemgrad@uoguelph.ca

## Graduate Faculty

*This list may include Regular Graduate Faculty, Associated Graduate Faculty and/or Graduate Faculty from other universities.*

### Nuria Daviu

BA, M.Sc., PhD Autonomous University Barcelona - Assistant Professor  
Graduate Faculty

### Wojciech Gabryelski

B.Sc., M.Sc. Technical Gdansk (Poland), PhD Alberta - Associate Professor  
Graduate Faculty

### Beverley Hale

B.Sc., M.Sc. Toronto, PhD Guelph - Professor and Associate Vice President Research (Agri-Food Partnership)  
Graduate Faculty

### Rui Huang

B.Sc. Peking, PhD Michigan - Assistant Professor  
Graduate Faculty

### Ronald Johnson

B.Sc., DVM Guelph, PhD Michigan State, Dip. ACVCP - Professor  
Graduate Faculty

### Bettina E. Kalisch

B.Sc., M.Sc., PhD Queen's - Associate Professor  
Graduate Faculty

### Niel A. Karrow

B.Sc. Guelph, M.Sc., PhD Waterloo - Professor  
Graduate Faculty

### Jibran Khokhar

B.Sc. Queen's, PhD Toronto - Associate Professor, Western University  
Associated Graduate Faculty

### Gordon M. Kirby

DVM Guelph, M.Sc. Surrey, PhD Guelph - University Professor Emeritus  
Associated Graduate Faculty

### Francesco Leri

BA, MA, PhD McGill - Professor  
Graduate Faculty

### Richard A. Manderville

B.Sc., PhD Queen's - Professor  
Graduate Faculty

### Mario A. Monteiro

B.Sc., PhD York - Professor  
Graduate Faculty

### Derek O'Flaherty

B.Sc., PhD Concordia - Assistant Professor  
Graduate Faculty

### Cynthia D. Scott-Dupree

B.Sc. Brandon, MPM, PhD Simon Fraser - Professor  
Graduate Faculty

### Paul K. Sibley

B.Sc., M.Sc. Guelph, PhD Waterloo - Professor and Interim Director  
Graduate Faculty

### E. James Squires

B.Sc., M.Sc., PhD Memorial - Professor  
Graduate Faculty

### Glen J. Van Der Kraak

B.Sc., M.Sc. Manitoba, PhD British Columbia - Professor  
Graduate Faculty

## Admission Requirements

Master's and doctoral students in the collaborative specialization in toxicology must meet the admission requirements of the participating program in which they are enrolled.

## Master's Program Requirements

Master's students in the collaborative specialization in toxicology must complete a minimum of 1.50 graduate credits including:

Code	Title	Credits
TOX*6000	Advanced Principles of Toxicology	0.50
TOX*6200	Advanced Topics in Toxicology	0.50

They must also complete courses required by the participating program in which they are enrolled.

It is expected that students' research (MRP or Thesis) or at least 30% of the courses in a course-based program be in the area of toxicology.

## Doctoral Program Requirements

Doctoral students in the collaborative specialization in toxicology must meet all the academic requirements specified by the participating program in which they are enrolled.

Students must also complete the following courses unless these courses, or equivalent, were completed as part of a master's program:

Code	Title	Credits
TOX*6000	Advanced Principles of Toxicology	0.50
TOX*6200	Advanced Topics in Toxicology	0.50

It is expected that the students' doctoral research be in the area of toxicology.

## Courses

### **TOX\*6000 Advanced Principles of Toxicology Summer Only [0.50]**

An intensive course in the principles of modern aspects of toxicology, taught in a lecture/case study format.

**Department(s):** Department of Chemistry

**Location(s):** Guelph

### **TOX\*6200 Advanced Topics in Toxicology Winter Only [0.50]**

Advanced topics in toxicology will include oral presentations by students, faculty members, and guest lecturers. The emphasis will be on advanced concepts and techniques in toxicology research with particular relevance to mechanistic, molecular and interpretive toxicology. Offered in conjunction with TOX\*4200. Extra work is required of graduate students.

**Restriction(s):** Credit may be obtained for only one of TOX\*6200 or TOX\*4200

**Department(s):** Department of Chemistry

**Location(s):** Guelph

### **TOX\*6590 Biochemical Toxicology Fall Only [0.50]**

The molecular mechanisms of action of carcinogens and other toxic compounds. Enzymes of biotransformation, including a detailed study of cytochrome P-450. Interactions of reactive species with DNA and other macromolecules. Offered in conjunction with TOX\*4590. Extra work is required of graduate students.

**Restriction(s):** Credit may be obtained for only one of TOX\*4590 and TOX\*6590

**Department(s):** Department of Chemistry

**Location(s):** Guelph

## Other Courses

Code	Title	Credits
BIOM*6721	Special Topics in Pharmacology-Toxicology	0.25
BIOM*6722	Special Topics in Biomedical Pharmacology-Toxicology	0.50
CHEM*7310	Selected Topics in Biochemistry	0.50
CHEM*7600	Selected Topics in Organic Chemistry	0.50