

**GENERAL TOXICOLOGY**  
**VME 6602**  
**3 credits**  
**Web-based, Fall/Spring**

**Instructor information**

Steve Roberts, Ph.D.: **Course instructor**  
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Office Hours by appointment

**General Description:** This course covers basic principles of toxicology and toxic effects of drugs and chemicals from an organ/system perspective. The general principles are broadly applicable; the organ/system discussion is applicable principally to mammalian (including human) toxicology and includes dose-response relationships, biotransformation, mechanisms of toxicity and means of assessing toxicity for various organs.

The course is offered in a distance-learning format. The student is required to complete 15 modules, each covering a different topic.

**Course Objectives:**

**Upon completion of this course, students will be able to:**

- Demonstrate knowledge of common mechanisms of toxicity
- Demonstrate knowledge of the way that various factors such as age, gender, nutritional status and manner of exposure influence toxicity
- Describe and interpret dose-response relationships
- Demonstrate understanding of the relationship of toxicology to risk assessment
- Describe the processes of absorption, distribution, metabolism, and excretion of toxicants
- Demonstrate familiarity with chemicals that cause various types of toxicity to the major organ systems of the body and identify the mechanism by which those chemicals cause toxicity

**Textbook:** Casarrett & Doull's Toxicology- The basic science of poisons (7<sup>th</sup> edition), 2008

**Other requirements:** Students registering for this course should have a working knowledge of the basics of biology, mammalian physiology, and biochemistry. Students who have questions regarding these requirements should contact the instructor.

**Assignments/Grading:** Coursework is divided into 15 modules. For each module, the student takes a time-limited exam consisting of multiple choice and true/false questions.

The student is also required to answer an essay question for each module. Each module contributes 100 points toward the final grade (75 for the quiz and 25 for the essay question). The letter grade for the course is based on the total points received out of 1500 possible points.

Topics for the modules are as follows:

Module	Topic
1	Introduction to the Course
2	Principles of Toxicology
3	Mechanisms of Toxicity
4	Risk Assessment
5	Absorption, Distribution, Metabolism, and Excretion of Toxicants
6	Toxicokinetics
7	Carcinogenesis and Genetic Toxicology
8	Developmental Toxicology
9	Toxic Responses of the Blood
10	Toxic Responses of the Immune System
11	Toxic Responses of the Liver
12	Toxic Responses of the Kidney
13	Toxic Responses of the Respiratory System
14	Toxic Responses of the Nervous System
15	Toxic Responses of the Reproductive System

***Academic Integrity*** – Students are expected to act in accordance with the University of Florida policy on academic integrity (see Graduate Student Handbook or this web site for more details: [www.dso.ufl.edu/judicial/procedures/academicguide.php](http://www.dso.ufl.edu/judicial/procedures/academicguide.php)).

Cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior. We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.

***Students with Disabilities*** - Students requesting classroom accommodation must first register with the Dean of Students Office, which will provide documentation to the student. The student should then provide this documentation to the instructor.