

**TOXIC SUBSTANCES**  
**VME 6605**  
**3 graduate credits**  
**Web-based, Spring/Summer Semester**

**Instructor information**

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

**General Description:** This course covers the toxicity of selected chemicals in humans. Examples from the most important classes of drugs and environmental agents, from a clinical toxicology perspective, are included. For each agent, sources of contact/exposure, signs and symptoms of poisoning, mechanisms of toxicity, laboratory tools for diagnosis, medical management, and potential long-term consequences of toxicity are discussed.

The course is presented as a series of web-based modules with tests at the end of each module. The student is required to complete 15 modules, each covering a different topic. Completion of the module includes taking a time-limited quiz on-line and submitting answers to one or more essay questions.

**Course Objectives:**

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

- Describe the signs and symptoms related to toxic exposures of selected agents
- Describe clinical management of toxicity from poisonings and overdoses of classes of agents
- Demonstrate knowledge of pharmacokinetic and toxicokinetic principles
- 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:** Goldfrank's Toxicologic Emergencies, 8<sup>th</sup> edition, Neal Flomenbaum, Lewis R. Goldfrank, Robert S. Hoffman, Mary Ann Howland, Neal A. Lewin, and Lewis S. Nelson, eds., McGraw Hill, New York, 2006.

**Other requirements:** Students registering for this course should have a working knowledge of the basics of biology, mammalian physiology, and biochemistry. They should also have had VME6602 General Toxicology or the equivalent. Students who have questions regarding these requirements should contact the instructor.

Module	Topic
1.	Principles of Managing the Poisoned Patient
2.	Carbon monoxide
3.	Cyanide
4.	Acetaminophen
5.	Salicylates
6.	Opiates
7.	Cocaine
8.	Amphetamines
9.	Ethanol
10.	Arsenic
11.	Lead
12.	Mercury
13.	Organophosphate pesticides
14.	Hydrocarbons
15	Snakebite

**Assignments/Grading:** The time-limited exams consist of multiple choice and true/false questions and an essay question. Each module contributes 100 points toward the final grade (75 points for the quiz and 25 points for the essay question). The letter grade for the course is based on the total points received out of 1500 possible points.

**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.