

## **TOXICOLOGY (PHRM 272; SPRING 2021)**

This 3-credit course is intended to provide an understanding of the chemical, biochemical and physiological factors that determine the pathological effects of chemicals in living systems.

### Prerequisites:

Biology, or Organic Chemistry, or Permission

### Course Director:

Dr. Wolfgang Dostmann, Professor of Pharmacology  
(656-0381; [wolfgang.dostmann@uvm.edu](mailto:wolfgang.dostmann@uvm.edu); Given B303B)

### Course Faculty:

Faculty Members of the Department of Pharmacology

### Time and Place:

**Monday's/Wednesday's/Friday's 9:40 – 10:30 AM taught REMOTELY**

### Format:

All lectures will be live and fully remote on Windows Teams or Zoom.

All lecture materials (recorded lectures, ppt files, handouts, etc) will be made available through Blackboard.

Note: attendance during the live Teams lectures is not mandatory (you can watch the lectures at any time, should you have time conflicts).

### Recommended Textbook:

**Casarett and Doull's Toxicology: The Basic Science of Poisons** – (9th Edition; 2019).

This text is the world's leading and most authoritative textbook on poisons and has been hailed as the most trusted all-in-one overview of the biomedical and environmental aspects of toxicology.

### Examinations:

A total of **4 written exams** are scheduled in roughly equal intervals throughout the course. Each exam is worth **25%** of the total score. The majority of questions will be multiple choice. Some questions may require short essay responses. **The exams are not cumulative.**

### Extra credit:

Students who wish to obtain extra credit can do so by submitting up to **two papers** on a subject **approved by the course director**. Each paper is approximately worth an **additional 5-7%** of the total score (equivalent of a full letter grade bump up). Details on deadlines, paper format and topics will be posted on Blackboard before exam 1.

### Graduate Students:

Students taking the course for graduate school credit have an **additional requirement** to submit a term **paper on a subject approved by the course director**. Students will be graded (pass/fail) on the thoroughness and quality of their paper.

## Course Schedule

2/1	Introduction	Dostmann
2/3	Toxins in our homes I	Dostmann
2/5	Toxins in our homes II	Dostmann
2/8	Toxicology of Gases: Carbon Monoxide	Dostmann
2/10	Toxicology of Gases: Cyanide	Dostmann
2/12	Toxicology of Gases: Air Pollutants I	Dostmann
2/15	Toxicology of Gases: Air Pollutants II	Dostmann
2/17	Toxicology of Airborne Particulate Matter	Dostmann
2/19	Toxicology of Smoking	Dostmann
2/22	Environmental Toxicology: Risk Assessment	Bress
2/24	<b>Exam 1</b>	
2/26	Plant Toxins I	Wellman
3/1	Plant Toxins II	Wellman
3/3	Plant Toxins III	Wellman
3/5	Plant Toxins IV	Wellman
3/8	Toxins from Fungi	Wellman
3/10	Toxicology of Pesticides	Morielli
3/12	Pesticides/Chemical Warfare	Morielli
3/15	Chemical Warfare	Morielli
3/17	Biological Warfare	Morielli
3/19	Bioterrorism	Morielli
3/22	<b>Exam 2</b>	
3/24	<b>Respite Day</b>	
3/26	Toxicogenomics	Carr
3/29	Chemical Carcinogenesis	Carr
3/31	Endocrine Disruptors	Carr
4/2	Toxicology of Heavy Metals: General Principles	Dostmann
4/5	Toxicology of Heavy Metals: Lead	Dostmann
4/7	Toxicology of Heavy Metals: Cadmium	Dostmann
4/9	Toxicology of Heavy Metals: Mercury	Dostmann
4/12	Toxicology of Arsenic	Dostmann
4/14	<b>Exam 3</b>	
4/16	Animal Toxins I	Wellman
4/19	Animal Toxins II	Wellman
4/21	Animal Toxins III	Wellman
4/23	Animal Toxins IV	Wellman
4/26	Animal Toxins V	Wellman
4/28	Analytical Methods in Toxicology	Morielli
4/30	Forensic Toxicology: Elements of Death	Morielli
5/3	Forensic Toxicology: Molecules of Death	Morielli
5/5	Toxicology of drugs of abuse	Morielli
5/7	Regulatory Toxicology I	Morielli
5/10	Regulatory Toxicology II	Morielli
5/13	<b>FINAL EXAM 7:30am to 1:30am</b>	