

Jordan University of Science and Technology
Faculty of Veterinary Medicine
Department of Veterinary Basic Medical Sciences
Fall Semester 2007/2008

Course Information	
Course Title	Veterinary Toxicology and Forensic Medicine
Course Number	VM 554
Prerequisites	VM 451
Course Website	NA
Instructor	Dr. Ehab Abu-Basha
Office Location	G2L3
Office Phone	22001
Office Hours	Sunday and Thursday 11:00 – 1:00 p.m
E-mail	abubasha@just.edu.jo
Teaching Assistant	NA
Course Description	

Text Book	
Title	Toxicology. (The National Veterinary Medical Series).
Author(s)	Osweiler
Publisher	Williams & Wilkins
Year	1996
Edition	
Book Website	
References	

Assessment Policy		
Assessment Type	Expected Due Date	Weight
First Exam		25%
Second Exam		25%
Final Exam		40%
Assignments		10%

Course Objectives	Weights
To understand the general principles in toxicology, toxicology concept and terminology. Toxicokinetics and calculation in toxicology	15%
To understand the Factor Influencing Toxicity and Therapy and Management of Toxicosis.	15%
To study the classes of toxicant including: metals and minerals. Insecticides, Herbicides Rodenticides, Household and Commercial Products.	20%
To understand the Feed and water Related Toxicoses	10%
To understand the classification of Mycotoxins and their toxicity	10%
Dealing professionally and legally with crimes against animals.	30%

Teaching & Learning Methods
Power point presentation. Video types of toxicological cases in animals.

Useful Resources
1- A Field Guide to Common Animal Poisons. Murphy. Iowa State Univ Press. 1996. 2- Handbook of Small Animal Toxicology. Gfeller and Messonnier. Mosby. 1998. 3- Veterinary Pharmacology and Therapeutics 7th Ed. by Adams. Iowa State Press. 1995.

Course Content		
Week	Topics	Chapter in Text , in addition to hand outs
1	I. General Toxicology ■ Toxicology Concept and Terminology. ■ Toxicokinetics: Absorption, Distribution, and Excretion of the Toxicant. ■ Calculation in Toxicology	
2	■ Factor Influencing Toxicity. - Introduction. - Factors in the Toxicant. - Factors in the Host Animal. - Environmental (External) Factors. ■ Diagnostic Toxicology - Diagnosis. - Gathering Important Information. - Specimen Collection to Support Chemical Analysis. - Selecting a Laboratory.	
3	■ Therapy and Management of Toxicosis. - Exposure to the Toxicant: Reduction or Elimination. - Emergency Intervention. - Antidotes. - Monitoring the Clinical Status. - Supportive measures during Therapy. - Owner education.	
4	II. Classes of Toxicant A) Metals and Minerals. - Introduction. - Arsenic, Copper, Iron, Lead, - Mercury, Molybdenum, Selenium, Zinc, and Fluoride Toxicosis.	
5	B) Insecticides. - Organophosphates and Carbamates, Organochlorine (Chlorinated Hydrocarbone). - Pyrethroids and Pyrethroids. - Rotenone, Amitraz, Nicotine, and others.	
6	C) Herbicides. - Introduction.	

	- Phenoxy herbicides, and Dipyridyl herbicides. D) Fungicides and Avicides.	
7	E) Rodenticides. - Anticoagulant Rodenticides, Cholecalciferol (Vitamin D₃) - Phosphide of Zinc, Calcium, or Aluminum. - Strychnine, Bromethalin, and Other Rodenticides.	
8	F) Household and Commercial Products: Ethylene glycol (antifreeze).	
9	G) Feed Related Toxicoses. - Overview of Feed Problems. - Antibiotics, Antiparasitic Drugs. - Growth and Performance Enhancer. - Nonprotein Nitrogen (NPN) Products. - Raw Soybeans. - Gossypol.	
10	H) Water Related Toxicoses. - Water Quality. - Nitrates, and Sodium-water imbalance. I) Plant-Related Toxicoses.	
11	J) Over-the Counter Drug and Drug of Abuse. K) Mycotoxins: Aflatoxin, Zearalenone, Fumonisin, Ergot, and Slaframine.	
12-16	الطب الشرعي: - الاستعراف على الحيوان الحي ، العلامات الطبيعية المميزة - الوشم ، الندب ، الجروح والتشوهات الخلقية - تقدير العمر ، فحص الشعر ، الاستعراف على الحيوان النافق - فحص بقايا الجثة ، الموت ، علامات الموت ، أسباب الموت - الجروح ، السحجات ، الكدمات ، الرضوض - أنواع الجروح للمختلطة - فحص البقع الدموية وغير الدموية - الإجهاض ، الاختناق	

Additional Notes	
Assignments	Lab reports
Exams	
Cheating	Cheating punishment will be according to the university regulations.
Attendance	According to university regulation.
Workload	
Graded Exams	
Participation	
Laboratory	Internal lab with assigned experiments are required
Projects	NA

