

Course Syllabus

offered by Department of Infectious Diseases and Public Health
with effect from Semester A 2020/21

Part I Course Overview

Course Title: Clinical Pharmacology/ Toxicology

Course Code: VM 4001

Course Duration: 1 semester

Credit Units: 3 credits

Level: B4

Arts and Humanities

Proposed Area:
(for GE courses only)

Study of Societies, Social and Business Organisations

Science and Technology

Medium of Instruction: English

Medium of Assessment: English

Prerequisites:
(Course Code and Title) Completion of Year 3 courses with C grade or above

Precursors:
(Course Code and Title) Nil

Equivalent Courses:
(Course Code and Title) Nil

Exclusive Courses:
(Course Code and Title) Nil

Part II Course Details

1. Abstract

The course is designed to familiarize students with the modes of action of the major classes of drugs used in veterinary medicine and drug use in the clinical setting. Ongoing cases in the City University Hospital for Small Animals, “mock” cases on farms and ambulatory clinic cases will be used as teaching tools. Concepts in pharmacology are emphasized, with a focus on the rationale for drug choice, alternative drug choices available, pharmacokinetic considerations, routes of administration, individual variation in responses, dose variation in responses, side-effects and potential drug interactions/toxicities. It also provides veterinary students with a solid introduction to concepts and principles of toxicology and how they are applied in the clinical setting. Students learn about specific common toxicants, clinical signs in affected animals, and treatment protocols for the toxicants in question. Students also gain an understanding of the clinical approach to suspected or unknown toxicoses, sample collection and handling, and resources available for clinical toxicological problems. The most clinically relevant approaches or emphases required with different species’ varied response to xenobiotics will also be taught.

2. Course Intended Learning Outcomes (CILOs)

(CILOs state what the student is expected to be able to do at the end of the course according to a given standard of performance.)

No.	CILOs [#]	Weighting* (if applicable)	Discovery-enriched curriculum related learning outcomes (please tick where appropriate)		
			A1	A2	A3
1.	Apply relevant pharmacokinetic and pharmacodynamics concepts to justify the selection of drugs for the treatment of veterinary patients		✓		
2.	Collect appropriate historical data, recognise clinical signs of intoxication and identify appropriate diagnostic samples for an individual animal or animal group suspected of exposure to common toxicants including poisonous plant varieties found in Hong Kong, and develop a rational approach to investigation		✓	✓	✓
3.	Design treatment protocols for common diseases and toxicants using major classes of drugs and taking into consideration therapeutic outcomes, potential drug interactions or toxicities, adverse effects, risks to human health, food safety and economic issues.		✓	✓	✓

4.	Apply antimicrobial stewardship principles to demonstrate responsible use of antibiotics, parasiticides, antiviral drugs, parasite vaccines and fungicides.		✓		
5.	Demonstrate a sound knowledge of local and international legislation relating to the use, dispensing and supply of veterinary medicines in order to be able to prescribe and dispense medicines correctly.		✓		
6.	Report suspected adverse reactions in compliance with local and international legislation		✓		
* If weighting is assigned to CILOs, they should add up to 100%.		100%			

3. Teaching and Learning Activities (TLAs)

(TLAs designed to facilitate students' achievement of the CILOs.)

TLA	Brief Description	CILO No.						Hours/week (if applicable)
		1	2	3	4	5	6	
Lectures and tutorials		✓	✓	✓	✓	✓	✓	2 hr/wk
Laboratory practicals		✓			✓			10 hours total
Clinical practicums	In clinical settings students will be introduced to "mock" cases and will be expected to develop an appropriate investigation and treatment protocol.	✓	✓	✓	✓	✓	✓	3 hours total

4. Assessment Tasks/Activities (ATs)

(ATs are designed to assess how well the students achieve the CILOs.)

Assessment Tasks/Activities	CILO No.						Weighting*	Remarks
	1	2	3	4	5	6		
Continuous assessment: 40%								
Quizzes	✓	✓	✓	✓	✓	✓	15%	
Mid Term	✓	✓	✓	✓	✓	✓	25%	
Final Examination: 60% (3 hrs)								
* The weightings should add up to 100%.							100%	

5. Assessment Rubrics

(Grading of student achievements is based on student performance in assessment tasks/activities with the following rubrics.)

Assessment Task	Criterion	Excellent (A+, A, A-)	Good (B+, B, B-)	Adequate (C+, C)	Failure (F)
Examinations and quizzes	Explain the modes of action of the major classes of drugs used in veterinary medicine and host responses. Explain the modes of action of the toxins commonly encountered in veterinary practice and describe appropriate treatments.	Demonstrates a highly developed knowledge and understanding of pharmacology, toxicology, and drug therapy	Demonstrates a well-developed knowledge and understanding of pharmacology, toxicology, and drug therapy	Demonstrates a basic knowledge and understanding of pharmacology, toxicology, and drug therapy	Demonstrates a lack of knowledge and understanding of pharmacology, toxicology, and drug therapy

Part III Other Information (more details can be provided separately in the teaching plan)

1. Keyword Syllabus

Clinical Pharmacology Toxicology poison drug interaction diagnosis antidote therapy sample diagnostic tests antimicrobial fungicidal parasiticidal pharmacokinetics

2. Reading List

2.1 Compulsory Readings

(Compulsory readings can include books, book chapters, or journal/magazine articles. There are also collections of e-books, e-journals available from the CityU Library.)

1.	Ramesh C Gupta (2012). <i>Veterinary Toxicology</i> .
2.	Goodman and Gilman. <i>Pharmacological Basis of Therapeutics</i> .
3.	Rang and Dale. <i>Pharmacology</i> .

2.2 Additional Readings

(Additional references for students to learn to expand their knowledge about the subject.)

1.	A Systems Affected Approach to Veterinary Toxicology, Val Beasley DVM, PhD, Dipl. ABVT IVIS: Veterinary Toxicology, http://www.ivis.org/advances/Beasley/toc.asp You must register to use this site (free).
2.	Konnie H Plumlee. <i>Clinical Veterinary Toxicology</i> .
3.	Peterson/Talcott. <i>Small Animal Toxicology</i> .
4.	A. Salam Abdullah (1990). <i>Poisonous plants of Malaysia</i> .
5.	Ian Ramsey. <i>BSAVA Small Animal Formulary 7th Edition</i> .