

VS204
Pharmacology
3 Credits

Instructor: Melissa Hall
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Reviewer: Dr. Robyn Rodgers

Created: 07/01/2014

Revised: 20/12/2020

Approval: 04/01/2021

The Implementation Date for this Outline is 06/01/2021

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VS204 Version: 5



Pharmacology

Calendar Description

This course covers various classes of drugs, their pharmacological action and use, routes of administration, absorption, metabolism, and excretion and pharmacokinetics. It also includes veterinary calculations, basic inventory control, handling and dispensing of drugs, as well as regulations governing veterinary use of drugs. Rational and safe use of drugs in veterinary clinics and in food producing animals is stressed.

Rationale

This is a required course for Animal Health Technology students. The AHT in a veterinary practice deals with a variety of drugs on a daily basis. Information as to the classes of drugs, general pharmacology, laws and regulations, dosage calculations and drug inventory management is essential.

Prerequisites

None

Co-Requisites

None

Course Learning Outcomes

Upon successful completion of this course, students will be able to

1. explain how drugs exert their effect on bodily systems and individual cells.
2. explain a dose-response curve, ED50 and LD50.
3. explain drug absorption, distribution and elimination.
4. prepare drug labels for dispensed medication
5. read and explain the information found on drug labels and inserts.
6. correctly dispense drugs in a veterinary clinic environment, including correct interpretation of common abbreviations.
7. state drug regulations and schedules for given drug types.

8. define the role of an AHT for rational and safe veterinary drug use, including definition of withdrawal times and prevention of residues in food producing animals.
9. list and explain the difference between the possible routes of administration in animals.
10. perform calculations of drug dosages and concentrations.
11. explain drug withdrawal times and its importance for drug safety.
12. list, explain and compare the common categories of drug types, and give examples of the common drugs used in veterinary medicine.
13. list and describe the side effects of the main categories of drugs used commonly in veterinary clinics.

Resource Materials

Required text(s):

None

Reference Text(s):

Bill, R. (2017). *Clinical Pharmacology and Therapeutics for Veterinary Technicians* (4th ed.)

St. Louis, Missouri. Elsevier.

Wanamaker, B. P. and Massey, K .L. (2015). *Applied Pharmacology for Veterinary*

Technicians (5th ed.). Elsevier.

Lake and Green. (2011). *Essential calculations for Veterinary Nurses and Technicians*

(2nd ed.). St. Louis, MS: Elsevier.

Conduct of Course

This is a lecture course (42 hours) with assignments and exams to ensure the student progresses satisfactorily and with the required knowledge to be successful.

Evaluation Procedures

The final grade is an aggregate of the following components:

2 midterms	45%
Quizzes/Assignments	25%
Final Exam	30%
Total	100%

Grade Equivalents and Course Pass Requirements

Letter	F	D	D+	C-	C	C+	B-	B	B+	A-	A	A+
Percent Range	0-49	50-52	53-56	57-59	60-64	65-69	70-74	75-79	80-84	85-89	90-94	95-100
Points	0.00	1.00	1.30	1.70	2.00	2.30	2.70	3.00	3.30	3.70	4.00	4.0

Students who achieve a mark between 50% and 60% in this course receive a grade of D in the course.

A minimum grade of C (60%) is required.

The instructor reserves the ability to hold pop quizzes throughout the semester with no prior notification.

Attendance

Classroom and laboratory attendance is considered vital to the learning process and as significant to the students' evaluation as examinations and reports, therefore absenteeism is recorded.

- a. Students having a combination of excused and/or unexcused absence of 20 percent or higher for the scheduled course hours can be required to withdraw and would then automatically receive a "RW" (required withdrawal) for the course, regardless of any other evaluation results. (RW is a failing grade).
- b. An excused absence is one that is verified with your instructor. Verification should be prior to the absence or the next class day following the absence. Verification of the absence may take the form of a note from your doctor/College nurse regarding illness, or a note from another instructor regarding a field trip or other activity, or authorization by your instructor following an in-person meeting. Be sure to contact your instructor and ask what they will require from you as verification for each absence. An unexcused absence is anything NOT verified by the instructor prior to the absence or the next class day following the absence.

NOTE: Any exceptions to the above attendance policy (e.g. timetable conflicts, work-related issues) must be approved in writing by the Department Chair prior to the beginning of the course.

It is the students' responsibility to know their own absentee record.

Normal hours are 8:30 a.m. to 6:30 p.m., with potential for evening courses, exams or extended field trips. Students are expected to be available for classes during these times.

Course Units/Topics

Topics

1. Routes of Administration and Drug Formulations
2. Veterinary calculations
3. Veterinary Drug Directorate laws and labels
4. Commercial Drug Labels and Inserts
5. Drug Inventory, Dispensing and Rational Use
6. Common abbreviations for Veterinary Drug Dispensing
7. Pharmacodynamics and Pharmacokinetics
8. Drug Classifications and Pharmacology
 - antimicrobials
 - anti-inflammatories
 - CNS drugs
 - respiratory drugs
 - biologicals
 - antiparasitcides
 - cardiovascular drugs
 - endocrine system drugs
 - chemotherapeutic agents



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