

Discipline: Agriculture	Sub-discipline: Veterinary Technician
General Course Title: Veterinary Laboratory and Pharmacy Procedures	Min. Units: 3 Semester
Proposed Suffix:	
<p>Course Description: Introduction to manual and automated veterinary lab techniques and procedures, including work with blood, urine, fecal and skin samples, Also includes discussion of veterinary pharmacology and common items dispensed with emphasis on proper labeling and dispensing instructions.</p>	
Required Prerequisites or Co-Requisites ¹	
Advisories/Recommended Preparation ²	
<p>Course Objectives: <i>At the conclusion of this course, the student should be able to:</i></p> <ul style="list-style-type: none"> • Collect a blood sample and determine the packed-cell volume by the hematocrit method. • Determine red and white blood cell count and do a differential count on a blood smear. • Sample and culture a pathogen and test it for antibiotic sensitivity. • Collect a skin sample and check for parasites and fungus. • Collect urine samples by cystocentesis and by catheter. • Perform micro and macro urinalysis. • Collect appropriate samples for cytological examination or for routine chemistry tests. • Collect a fecal sample and check for endoparasites. • Perform standard tests for heartworm infestation. • Collect appropriate necropsy specimens. • Perform routine lab equipment maintenance and keep records. • Stock pharmaceutical supplies and control their inventories. • Stock, issue, record and handle controlled substances correctly. • Reconstitute medications and calculate dosages of prescribed medications. • Package, label and dispense prescription drugs. • Identify specific pharmaceutical agents. 	
<p>Course Content:</p> <ol style="list-style-type: none"> 1. Blood sample <ol style="list-style-type: none"> a. Collect a blood sample b. Determine packed-cell volume c. Determine total red and white cell count d. Blood smear differential counts e. Standard heartworm test f. Routine serological evaluation using test kits 2. Antibiotic sensitivity test 3. Skin samples <ol style="list-style-type: none"> a. Parasites and fungus <p>Veterinary Laboratory and Pharmacy Procedures (Content Continued)</p> <ol style="list-style-type: none"> 4. Urine <ol style="list-style-type: none"> a. Collect urine samples 	

¹ Prerequisite or co-requisite course need to be validated at the CCC level in accordance with Title 5 regulations; co-requisites for CCCs are the linked courses that must be taken at the same time as the primary or target course.

² Advisories or recommended preparation will not require validation but are recommendations to be considered by the student prior to enrolling.

- b. Cystocentesis and catheter
- c. Micro urinalysis
- d. Macro urinalysis
- 5. Cytological samples
 - a. Identify cells and microorganisms
 - b. Evaluate semen
 - c. Other examinations
- 6. Fecal samples
 - a. Evaluate for endo parasites
 - b. Floatation technique
 - c. Direct smear technique
- 7. Necropsy specimens
 - a. Collect and preserve samples
- 8. Lab equipment maintenance
 - a. Calibrate, service and perform routine maintenance on lab equipment
 - b. Keep maintenance records
- 9. Pharmacy orientation
 - a. OTC and prescription items
 - b. Packaging and labeling
 - c. Inventory
- 10. Pharmacy techniques
 - a. Dosage calculations, language and labeling
 - b. Pre-packaging and reconstituting medications
 - c. Stock, issue, record and handle controlled substances
 - d. Dispensing instructions
- 11. Pharmaceutical agents
 - a. Anthelmintics
 - b. Antiseptics/disinfectants
 - c. Vaccines
 - d. Drugs affecting autonomic nervous system
 - e. Drugs affecting central nervous system
 - 1) Anesthetics
 - 2) Tranquilizers
 - 3) Anticonvulsants
 - 4) Analgesics
 - 5) Antipyretics
 - 6) Sedatives
 - 7) Narcotics
 - f. Antihistamines

**Veterinary Laboratory and Pharmacy Procedures
(Content Continued)**

- g. Drugs affecting the circulatory system
 - 1) Vasodilators
 - 2) Vasoconstrictors
 - 3) Cardiotonic agents

- 4) Cardiac depressants
- h. Drugs affecting the gastrointestinal system
 - 1) Emetics
 - 2) Anti-emetics
 - 3) Adsorbents
 - 4) Anti-diarrheas
 - 5) Cathartics
- i. Metabolic drugs
 - 1) Hormones
 - 2) Vitamins
 - 3) Minerals
- j. Drugs affecting the respiratory systems
 - 1) Bronchodilators
 - 2) Respiratory analeptics
 - 3) Cough medications

- 12. Drugs acting on the urinary system
 - a. Diuretics
 - b. Urinary acidifiers

Laboratory Activities: Individual Laboratory Activities are designed to support course objectives.

Methods of Evaluation: Lecture Comprehensive Quizzes and Exams Written Critical Thinking Scenarios Problem Analysis and Solution Research and Term Papers	Methods of Evaluation: Laboratory Laboratory Skill Validation by Observation Laboratory Reports Diagnoses and Problem Solving Laboratory Skill Practicum Certification Exams
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Typical Textbooks, Manuals, or Other Support Materials
Fundamentals of Pharmacology for Veterinarian Technicians, Amundson Romich, Janet, Thompson, Delmar Publishing, 2005
Labroatory Procedures for Veterinary Technicians, Hendrix, Charles M., Fourth Edition, Mosby, 2002
Essential Math and Calculations for Pharmacy Technicians, Reddy, Indra K., and Khan, Mansoor A., CRC Press, 2003

Statewide Articulation: Under review

FDRG Lead Signature: _____ Date: _____

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