

Course discipline/number/title: VT 2270: Laboratory Animal Care and Management

A. CATALOG DESCRIPTION

1. Credits: 3
2. Hours/Week: 5, 1 Lecture/4 Lab
3. Prerequisites (Course discipline/number): VT 1410, VT 1710, VT 1810, VT 2900
4. Other requirements: All previous required courses must have been completed with a C or better.
5. MnTC Goals (if any): NA

B. COURSE DESCRIPTION: This course introduces the care and management of common laboratory species, avian, reptile, and exotic pets. Discussion will include husbandry, animal behavior, nutrition, identification, restraint, common clinical conditions, nursing procedures, and preventive health care. Presents the fields of laboratory research and zoological medicine. Exotic and laboratory animals are introduced to allow hands-on experiences. Field trips may also be included. To enroll in this course, all previous required courses must have been completed with a C or better.

C. DATE LAST REVISED (Month, year): December, 2024

D. OUTLINE OF MAJOR CONTENT AREAS:

1. Breed identification
2. Restraint techniques
3. Physical examination
4. Administration of medication
5. Sample collection
6. Disease prevention

E. LEARNING OUTCOMES (GENERAL): The student will be able to:

1. Identify the breeds of laboratory and exotic animals.
2. Demonstrate techniques for administering medications and collection of samples.
3. Recognize the preventable diseases of laboratory and exotic animals.
4. Identify common surgical procedures of laboratory and exotic animals and species differences.
5. Identify disease prevention protocols for laboratory and exotic animals.
6. Identify various methods of anesthesia of laboratory and exotic animals.
7. Identify normal physiological values of laboratory and exotic animals.
8. Define the technician's role in laboratory animal nursing and medical research.
9. Define the technician's role in exotic animal nursing.
10. Understand the approach to providing safe and effective care for birds, reptiles, amphibians, guinea pigs, hamsters, gerbils, chinchillas, rabbits, and ferrets.
11. Recognize and restrain laboratory and exotic animals.
12. Perform or supervise basic care including handling, nutrition, and watering.
13. Understand unique husbandry issues for each species and provide client education.
14. Understand USDA regulations and other regulating bodies governing laboratory animals.
15. Collect blood samples, administer injections, and perform oral dosing of laboratory animals.
16. Understand the role and responsibilities of technicians in zoo and wildlife medicine.
17. Perform physical examinations on laboratory and exotic animals.
18. Recognize normal from abnormal behavior patterns in laboratory and exotic animals.

F. LEARNING OUTCOMES (MNTC):

G. METHODS FOR EVALUATION OF STUDENT LEARNING: Methods may include but are not limited to:

1. Laboratory reports and/or quizzes
2. Examinations
3. Laboratory practical tests
4. Course assignments
5. Participation

- H. RCTC CORE OUTCOME(S). This course contributes to meeting the following RCTC Core Outcome(s):
Critical Thinking. Students will think systematically and explore information thoroughly before accepting or formulating a position or conclusion.
- I. SPECIAL INFORMATION (if any):
The initial lab session explains and familiarizes the student with general safety hazards and safety equipment to the lab. During the pre- lab discussion, the hazardous characteristics of any materials used during a lab are discussed. In addition, if the lab involves any potentially infectious or zoonotic material, the students will be instructed on the proper use and disposal. The instructor will direct all students to where necessary protective equipment while working with any hazardous chemicals. A copy of the Safety Data Sheets for chemicals used is available in the lab.