

Course discipline/number/title: VT 2830: Clinical Laboratory Techniques II

A. CATALOG DESCRIPTION

1. Credits: 3
2. Hours/Week: 2 lecture, 2 lab
3. Prerequisites (Course discipline/number): VT 1610, VT 2230, VT 2270, VT 2820, VT 2920
4. Other requirements: To enroll in this course, all previous required courses must have been completed with a grade of C or better.
5. MnTC Goals (if any): NA

B. COURSE DESCRIPTION: This course is the summation of the laboratory skills and techniques needed by the veterinary technician. Application of microbiological application as used by veterinary technicians is covered. Cytology, serology testing and semen analysis techniques, are also covered. This course includes a hands-on situations covering all laboratory procedures as mentioned previously. Participation is required for successful completion of this course. To enroll in this course, all previous required courses must have been completed with a grade of C or better.

C. DATE LAST REVISED (Month, year): November, 2022

D. OUTLINE OF MAJOR CONTENT AREAS:

1. Microbiology
2. Cytology
3. Serology testing
4. Semen analysis
5. Review of previous laboratory techniques
6. Mycology testing and identification

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

1. Demonstrate the knowledge and skills of the various laboratory methods used in the identification of bacteria.
2. Identify and perform drug sensitivity testing of common disease-causing organisms.
3. Assist in collecting, preparing and appropriately evaluating cytology specimens.
4. Perform fine needle tissue aspirates and impression smears.
5. Assist in collecting, preparing, evaluating semen.
6. Explain timing and types of pregnancy testing.
7. Collect, prepare and evaluate canine vaginal smears for reproductive determination.
8. Collect, prepare and perform representative microbiology.
9. Conduct mastitis and bacteria culture testing.
10. Perform diagnostic microbiologic procedures.
11. Differentiate between positive and negative serological test results.
12. Identify and perform different types of serology tests.
13. Prepare material for mycologic testing.
14. Culture and identify common dermatophytes.
15. Collect, prepare, and evaluate ear cytology.
16. Identify the significance of abnormal results of clinical chemistry.
17. Identify common tests that appear in various chemistry profiles.
18. Identify common laboratory test used to evaluate kidney, pancreatic, and liver function, as well as electrolytes and minerals, in small and large animals.

F. LEARNING OUTCOMES (MNTC): NA

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. Group work

- G. METHODS FOR EVALUATION OF STUDENT LEARNING: Methods may include but are not limited to:  
6. projects
- H. RCTC CORE OUTCOME(S). This course contributes to 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 Material Safety Data Sheets for chemicals used is available in the lab.