



## **Course Description**

### **ATE2638 | Animal Lab Procedures 1 | 3.00 credits**

This course is designed to introduce the veterinary technician to common parasites and their life cycles seen in routine veterinary practice. Also, hematology and the kinetics of the hematopoietic system are discussed with emphasis on normal blood smears and common changes seen during disease stages of the domestic animals. Prerequisites: ATE1110, 1211; corequisite: ATE2638L.

### **Course Competencies:**

**Competency 1:** The student will demonstrate an understanding of standard clinical laboratory protocols by:

1. Explaining the pros and cons of the in-house versus the reference laboratory
2. Producing accurate laboratory requests for the reference lab
3. Enumerating the contents of the vacutainer system collection tubes according to cap color
4. Entering patient identification data on tubes and vials for laboratory use
5. Maintaining logbooks for lab tests in a clear, accurate manner
6. Explaining how clinical laboratory procedures serve as an aid in diagnostic/ medical care
7. Discussing the importance of normal and abnormal results
8. Showing the use of conversion formulas
9. Explaining the consequences of drug interactions with test results

**Competency 2:** The student will demonstrate an understanding of the requirements for proper sample collection by:

1. Displaying the different blood tests that require anticoagulant solutions
2. Acquiring the necessary skills to collect blood, fecal, and other samples safely
3. Identifying samples with owner and patient name, date, and time of collection

**Competency 3:** The student will demonstrate an understanding of the function of the hematology lab by:

1. Displaying knowledge of hematology samples' collection, preparation, processing, and storage procedures
2. Displaying the characteristics of the vacutainer
3. Identifying in a blood smear the normal and abnormal red and white blood cells and platelets
4. Evaluating hematological blood test results
5. Discussing manual versus automated hematology testing methods
6. Identifying diseases of abnormal coagulation and the tests used for establishing a diagnosis
7. Identifying average values for common canine and feline

**Competency 4:** The student will demonstrate an understanding of parasitology and coprological studies by:

1. Explaining the procedure to follow when examining a stool sample
2. Defining the macroscopic and microscopic parameters when examining fecal samples
3. Preparing a slide for direct and flotation examination
4. Defining terminology used when discussing parasite lifecycles
5. Identifying different classes of various parasites
6. Identifying genus species of common canine and feline parasites
7. Recognizing prepatent periods for various parasites
8. Explaining the different life cycles of intestinal and blood parasites
9. Discussing the zoonotic and epidemiological potential of common intestinal parasites
10. Recognizing various flotation solutions used for parasite examination and how to maintain their efficacy
11. Explaining control and prophylactic methods in parasitology, with emphasis on client education

**Learning Outcomes**

- Communicate effectively using listening, speaking, reading, and writing skills
- Use quantitative analytical skills to evaluate and process numerical data
- Solve problems using critical and creative thinking and scientific reasoning