



# Veterinary Technician

## EXAM INFORMATION

**Items**

33

**Points**

47

**Prerequisites**

VETERINARY ASSISTANT

**Grade Level**

11-12

**Course Length**

ONE YEAR

**Career Cluster**AGRICULTURE, FOOD AND NATURAL  
RESOURCES**Performance Standards**

NONE

**Certificate Available**

YES

## DESCRIPTION

This course is designed for students who have previously taken the Veterinary Assisting course and wish to further their education and training in the veterinary field. The Veterinary Technician course expands student knowledge, reinforces skills previously learned, and builds proficiency in highly scientific areas, such as pharmacology, anesthesiology, radiology and imaging, fluid therapy, and critical care nursing.

## EXAM BLUEPRINT

STANDARD	PERCENTAGE OF EXAM
1- FFA/HOSA In Agricultural Education	9%
2- Supervised Agricultural Experience (SAE)	2%
3- Same and Appropriate Care of Animals	26%
4- Pharmacological Principles	13%
5- Surgical Procedures	6%
6- Pre-Anesthesia and Anesthesia Recovery	19%
7- Radiographs and Alternative Images	4%
8- Fluid Therapy	9%
9- Critical Care Nursing	10%
10- Veterinary Laws and Ethics	2%



## **STANDARD 1**

### STUDENTS WILL UNDERSTAND THE ROLL OF FFA/HOSA IN AGRICULTURAL EDUCATION

- Objective 1 Students will explain the purpose of leadership opportunities associated with FFA/HOSA.
- Objective 2 Students will have the opportunity to participate in both veterinarian-related and leadership events with FFA/HOSA.
- Objective 3 Students will understand the professionalism requirements related to FFA/HOSA participation.
- Objective 4 Students will be able to describe how FFA/HOSA develops leadership skills, personal growth, and career success.
- Objective 5 Students will understand the history and organization of FFA/HOSA.

## **STANDARD 2**

### STUDENTS WILL PARTICIPATE IN A SUPERVISED AGRICULTURAL EXPERIENCE PROGRAM

- Objective 1 Students will develop an understanding of the interrelationship of the veterinary team as a unit and will function as an effective, professional member of the team throughout the externship experience.
- Objective 2 Students will demonstrate excellent decision-making abilities as they evaluate patient needs and determine the best way to meet those needs.
- Objective 3 Students will demonstrate a commitment to high quality patient care throughout the externship experience.
- Objective 4 Students will exhibit appropriate confidentiality practices as they work with clients and patients during the externship experience.
- Objective 5 Students will develop excellent professionalism, work skills, and work habits during the externship experience.
- Objective 6 Students will learn how to appropriately manage a veterinary office.
- Objective 7 Students will develop an understanding of how to manage inventory in a veterinary office.

## **STANDARD 3**

### STUDENTS WILL DEMONSTRATE THE ABILITY TO PROVIDE SAFE AND APPROPRIATE CARE OF ANIMALS TO INCLUDE SMALL, LARGE, EXOTIC, AND LABORATORY ANIMALS

- Objective 1 Students will further develop and refine animal-care skills that were taught during the Veterinary Assisting program.
- Objective 2 Students will further develop assessment skills and be able to demonstrate the ability to evaluate patient needs and develop a safe, effective plan of care.
- Objective 3 Advanced students will demonstrate their technical and clinical skills, as well as their communication and leadership abilities, as they assist in teaching veterinary assisting skills to first-year students.

## **STANDARD 4**

### STUDENTS WILL EXHIBIT AN UNDERSTANDING OF PHARMACOLOGICAL PRINCIPLES AS THEY DEMONSTRATE THE ABILITY TO CALCULATE DOSAGES, SAFELY ADMINISTER MEDICATIONS, AND MONITOR PATIENT OUTCOMES



- Objective 1 Students will demonstrate knowledge of and ability to follow safe practices related to medication administration.
- Objective 2 Students will demonstrate the ability to interpret medication orders and follow them as ordered.
- Objective 3 Students will become familiar with the generic and brand names of various drugs.
- Objective 4 Students will have knowledge of the drug categories and what drugs are commonly found in those categories.
- Objective 5 Students will be able to accurately calculate dosages and know how to administer medications by parenteral, enteral, topical and other routes.
- Objective 6 Students will verbalize an understanding of how to maximize the therapeutic benefit of medications, while minimizing the potential for adverse effects.
- Objective 7 Students will apply their knowledge of anatomy and physiology principles as they evaluate how medications will affect various body systems.
- Objective 8 Students will demonstrate the ability to properly educate clients about medications.
- Objective 9 Students will demonstrate an understanding of the regulations governing the use of controlled substances.
- Objective 10 Students will demonstrate compliance with all regulatory guidelines related to drug purchase, storage, administration, disposal, and inventory control.

## **STANDARD 5**

### **STUDENTS WILL ASSIST WITH SURGICAL PROCEDURES FURTHER DEVELOPING THE SKILLS GAINED DURING THE VETERINARY ASSISTING PROGRAM**

- Objective 1 Students will demonstrate an understanding of surgical and aseptic principles.
- Objective 2 Students will be skilled in passing and utilizing surgical instruments.
- Objective 3 Students will demonstrate the ability to assist with surgical procedures, from the pre-operative through the post-operative stage.

## **STANDARD 6**

### **STUDENTS WILL DEMONSTRATE THE ABILITY TO SAFELY AND EFFECTIVELY MANAGE PATIENTS FROM PRE-ANESTHESIA TO ANESTHESIA RECOVERY**

- Objective 1 Students will demonstrate the ability to follow safe practices related to anesthesia administration.
- Objective 2 Students will demonstrate an understanding of the use and maintenance of anesthesia machines.
- Objective 3 Students will demonstrate the ability to calculate dosages of appropriate anesthetic-related drugs.
- Objective 4 Students will be able to utilize their knowledge of anatomy and physiology to evaluate the possible effects of anesthesia on the patient.
- Objective 5 Students will demonstrate the ability to administer anesthetic-related drugs by injection and inhalation techniques.
- Objective 6 Students will demonstrate the ability to monitor patients while under anesthesia.
- Objective 7 Students will demonstrate the ability to provide post-operative patient care.
- Objective 8 Students will demonstrate effective trouble shooting skills, for both machine and patient problems that may arise.
- Objective 9 Students will be able to compare anesthesia requirements and concerns in various species of animals.



## **STANDARD 7**

### **STUDENTS WILL BE ABLE TO SAFELY AND EFFECTIVELY PRODUCE RADIOGRAPHS AND ALTERNATIVE IMAGES**

- Objective 1 Students will demonstrate knowledge of and ability to follow safe practices related to radiology and imaging procedures.
- Objective 2 Students will implement radiographic quality control measures.
- Objective 3 Students will demonstrate the ability to correctly position animals for imaging procedures.
- Objective 4 Students will exhibit an understanding of animal anatomy as they implement radiographic and imaging procedures.
- Objective 5 Students will demonstrate the ability to accurately utilize ultrasonography, digital, and endoscopic equipment Students will demonstrate the ability to accurately utilize ultrasonography, digital, and endoscopic equipment
- Objective 6 Students will accurately demonstrate developing techniques for both manual and automatic processors.
- Objective 7 Students will demonstrate the ability to utilize table-top and portable radiography machines.
- Objective 8 Students will demonstrate the ability to troubleshoot as problems arise.

## **STANDARD 8**

### **STUDENTS WILL DEMONSTRATE THE ABILITY TO SAFELY AND EFFECTIVELY PROVIDE FLUID THERAPY**

- Objective 1 Students will demonstrate the correct placement of peripheral and central line IV catheters.
- Objective 2 Students will properly maintain and care for IV catheters.
- Objective 3 Students will be able to correctly calculate fluid needs and drip rates based on dehydration status.
- Objective 4 Students will be able to describe the use of the various fluids used for fluid therapy and delivery systems.
- Objective 5 Students will correctly demonstrate how to administer fluids.
- Objective 6 Students will identify the clinical symptoms of fluid overload and know the proper treatment of this condition.

## **STANDARD 9**

### **STUDENTS WILL DEMONSTRATE AN ABILITY TO EVALUATE THE PATIENT'S CONDITION AND PROVIDE CRITICAL CARE NURSING AS NEEDED**

- Objective 1 Students will apply acquired knowledge of anatomy and physiology as they evaluate patient condition.
- Objective 2 Students will demonstrate an understanding of medical terminology relating to medical records.
- Objective 3 Students will demonstrate knowledge of emergency protocols and implement them, as needed.
- Objective 4 Students will demonstrate proficiency at performing triage, CPR, and first aid.



- Objective 5** Students will demonstrate an understanding of concepts and the ability to perform skills related to the following types of emergencies:
1. Respiratory Emergencies
  2. Gastrointestinal Emergencies
  3. Musculoskeletal Emergencies
  4. Metabolic and Endocrine Emergencies
  5. Neurological Emergencies
  6. Toxicological Emergencies
  7. Cardiology Emergencies (ECGs)
- Objective 6** Students will demonstrate an understanding of appropriate nutritional needs for the critical patient.
- Objective 7** Students will maintain emergency supplies
- Objective 8** Students will have an understanding of the physical therapy techniques used in neurological and musculoskeletal disorders.
- Objective 9** Students will demonstrate an understanding of appropriate critical care nursing by analyzing case studies and identifying the appropriate treatment.

## **STANDARD 10**

### **STUDENTS WILL EXPRESS AN UNDERSTANDING OF VETERINARY LAWS AND ETHICS**

- Objective 1** Students will understand the laws that govern veterinary medicine.
- Objective 2** Students will recognize the legality of the veterinary-client-patient relationship.
- Objective 3** Students will be able to identify the various associations available in the veterinary field.
- Objective 4** Students will demonstrate an understanding of veterinary laws and ethics by analyzing case studies and identifying how laws and rules apply to these cases.

#### **No Performance Requirements**