

Burlington County Institute of Technology

Medford Campus

Westampton Campus

**CAREER MAJOR PROGRAMS**

**Course Title: Veterinary Technology**

Curriculum Area: CTE

Credits: 5

Board Approved: May, 2019

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Veterinary Technology  
Curriculum

**I. Course of Study (Proposed):**

A. Intro to Vet I	9th	Q2/B4
B. Intro to Vet II	9th	S2/B4
C. Patient Management	10th	S1/B1 or 2
D. Intro to Vet Nursing	10th	S2 /B1 or 2
E. Clinical Sciences I	10th	S2/B1 or 2
F. Clinical Sciences II	11th	S1/B1 or 2
G. Advanced Veterinary Nursing	11th	S1/B1 or 2
H. Emergency and Critical Care	11th	S2/B1 or 2
I. Nutrition	12th	S1/B3
J. CVA	12th	S2/B3 or 4

**II. Course Description:** Veterinary Technology is a multi-level program designed for students interested in pursuing careers in fields such as veterinary assistant or technician, kennel assistant, groomer, animal laboratory assistant, stable hand, or pet product retail facility. The course included theory and practical applications in the following areas: anatomy and physiology, veterinary terminology, restraint of animals, surgical assisting, CPR and first aid, emergency procedures, nutrition, diagnostic imaging, parasitology, hematology, preventive medicine, office procedures, and grooming. This program will offer practical experiences with local veterinary professionals.

**III. Program Outcome:** Graduates of the Veterinary Technology program will possess the skills and competencies required for Level One Veterinary Assistant employment at an animal hospital as well as a foundation for pursuing post-secondary education. Upon completion of this course plus 300 hours in the field, students can receive certification as a Certified Veterinary Assistant - Level One.

## **IV. Course Descriptions**

### **A. Intro to Vet I (9th)**

This course is designed to introduce basic animal anatomy and physiology, veterinary terminology, grooming of small animals, sanitation of the veterinary hospital and kennel, and principles of dentistry. Students will get an overview of the veterinary profession and be able to describe the educational requirements of veterinary team members.

### **B. Intro to Vet II (9th)**

This course explores in more detail anatomy and physiology, root words, prefixes, suffixes of the vocabulary used in the veterinary field. More intricate grooming procedures will be introduced as well as continued cleaning & sanitation procedures. Concepts of small animal restraint will be covered, as well as canine, feline, and equine breed characteristics and medical problems. Students will begin restraining small animals, primarily canines, and utilize their knowledge of animal behavior to problem solve for completion of grooming tasks. They will also be introduced to large animal husbandry and nutrition.

### **C. Patient Management (10th)**

Introduction to disease mechanisms that can be prevented through vaccines and preventive medications such as flea and tick preventives. Administering injections and taking patient histories will be covered. Also, receptionist skills and client education will be introduced during this course. Students will learn the proper procedures for answering phones, making appointments, admitting and discharging clients/patients, filing. Students will become proficient in Cornerstone Veterinary software procedures for veterinary hospitals. A basic study of endoparasites and ectoparasites. Students will learn how to perform a fecal float, including proper use of a microscope and parasite/egg identification and skin scrapes. Preventive medications and treatments will be discussed as well as PPE (personal protective equipment). Also to be covered is reproduction.

### **D. Intro to Vet Nursing (10th)**

Small and large animal medical nursing will be covered and will include introductory level material related to the care of animals, first aid, surgical instrumentation and assistance, aseptic technique, and surgical nursing. Introduction to pharmacology is included.

#### E. Clinical Sciences I (10th)

Students will be introduced to practical applications of veterinary nursing and diagnostic sampling. They will learn restraining techniques for blood draws, how to give injections, how to wrap and sterilize surgery packs, how to perform surgical scrub and patient preparation for surgery, and the principles of hematology and cytology.

#### F. Clinical Sciences II (11th)

Students will continue to practice their clinical skills related to veterinary nursing and diagnostic sampling and are expected to perform tasks on live patients. They will also demonstrate competencies in more advanced nursing and surgical skills such as first aid, bandaging techniques, heartworm testing, donning sterile gowns and gloves, and placing IV catheters.

#### G. Advanced Veterinary Nursing (11th)

This course is designed to teach students about supportive care for dehydrated animals, IV catheter placement, different types of fluids for fluid therapy, fluid calculations to aid with hydration status of an animal. Wound healing and proper bandaging techniques will also be covered. Principles of diagnostic imaging will be introduced, in addition to endocrinology and endocrine pathology. Students will also learn euthanasia procedures.

#### H. Emergency and Critical Care (11th)

This course will cover advanced fluid therapy and transfusion medicine, emergency nursing and triage, management of the sick patient, wound management and first aid, and canine CPR. Principles of pharmacology will also be covered, including abbreviations used in veterinary pharmacology, prescription interpretation and filling, and dosage forms of drugs. Also explored will be routes of administration, medication administration, and PPE. Controlled substances and classes of drugs will be introduced. Students will learn to convert weights, fill prescriptions, medication dosing, and fluid conversions. A basic calculator is required for this course.

#### J. Nutrition (12th)

Students will explore how to formulate a specific diet for different animal species, how to use different feeding methods for well and sick pets, and learn the basic nutrient classes and requirements for a healthy diet. Digestive anatomy will be covered in detail, with specific attention regarding the differences between digestive tracts of ruminants and small animals. Diseases related to nutrition will

be introduced, and students will learn how proper nutrition contributes to healthy pets. Also to be covered is neonatal care of the puppy, kitten, and foal, and basic dietary requirements of birds, reptiles, and small mammals.

L. CVA (Certified Veterinary Assistant) (12th)

This course will prepare students for the level one national certification test for veterinary assistant as approved by NAVTA. Units covered will include: medical terminology, zoonotic disease, restraint of large and small animals, safety in the exam room, laboratory procedures involving feces, urine, and blood, use of x-ray machine, medicinal grooming, breeds of dairy, sheep, goat and swine, surgery preparation, physical therapy, safety in the pharmacy, and teamwork.

**Course: Introduction to Vet I**

**S1**

**Grade 9**

**Unit: Anatomy and Physiology**

CTE Proficiencies	Essential Questions	Content	Skills	Assessments
<p>NJSLS: RST:9.10.9 RST.9-10.4 RST.9-10.5 WHST.9-10.6</p> <p>CRP: 1,2,4</p> <p>CTE STANDARDS: 9.3.12.AG-ANI.7</p>	<p>What are the anatomical and physiological differences between mammalian species?</p>	<p>External anatomy</p> <p>Musculoskeletal System</p>	<p>Identification of body parts and bones.</p> <p>Proper use of directional terminology.</p>	<p>Written tests/quizzes.</p> <p>Practical tests: skeletal labeling or oral identification on a live animal.</p> <p>Oral test/quiz on directional terminology.</p>

**Course: Introduction to Vet I****S1****Grade 9****Unit: Veterinary Terminology**

CTE Proficiencies	Essential Questions	Content	Skills	Assessments
NJSLS: WHST.9-10.6 RST.9-10.4 RST.9-10.5 RST.9-10.6  CRP: 4,2,11  CTE STANDARDS: 9.3.12.AG-ANI.7	What is the importance of understanding veterinary terminology?  Why is medical terminology used in veterinary medicine?	Anatomy & Physiology  Pharmacology  Hematology  Nursing	Identify and define combining forms, prefixes, suffixes.  Correctly spell and pronounce veterinary medical terms.	Vocabulary quizzes from Quizlet.com, both instructor and student generated.  Terminology powerpoints.

**Course: Introduction to Vet I****S1****Grade 9****Unit: Grooming**

CTE Proficiencies	Essential Questions	Content	Skills	Assessments
NJSLS:  WHST.9-10.2 RST.9-10.3 RST.9-10.4	How does grooming aid in the health of an animal?  Why is recognizing	Health Assessment  Body Condition Score TPR	Use proper restraint techniques for various procedures.  Clean ears and eyes.	Practical and skills assessments.  Individual observations by instructor.

<p>RST.9-10.5 RST.9-10.6</p> <p>CRP: 10, 12</p> <p>CTE STANDARDS: 9.3.12.AG-ANI.2 9.3.12.AG-ANI.3 9.3.12.AG-ANI.5 9.3.12.AG-ANI.7</p>	<p>animal behavior signs important?</p>	<p>Animal Behavior</p>	<p>Take accurate weight and vitals.</p> <p>Clip nails.</p> <p>Bathe and shave; select appropriate grooming products and tools.</p> <p>Use additional restraint equipment when needed, such as muzzles.</p>	
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**Course: Introduction to Vet I**

**S1**

**Grade 9**

**Unit: Cleaning & Sanitation**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
<p>NJSLS: RST.9-10.3 RST.9-10.4 RST.9-10.5</p> <p>CRP: 1,2</p> <p>CTE STANDARDS: 9.3.12.AG-ANI.2 9.3.12.AG-ANI.5 9.3.12.AG-ANI.7</p>	<p>Why is it necessary to disinfect a veterinary hospital?</p> <p>Why is safety important when cleaning and sanitizing?</p>	<p>Safe use of disinfectants and antiseptics.</p> <p>Prevention of the spread of disease.</p>	<p>Diluting the disinfectant.</p> <p>Using PPE for disinfection of cages, runs, and tables.</p>	<p>Practical and skills assessments.</p> <p>Individual observations by instructor.</p>

**Course: Introduction to Vet I**

**S1**

**Grade 9**

**Unit: Dentistry**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLS RST.9-10.3 RST.9-10.4 RST.9-10.5 RST.9-10.2 RST.9-10.6  CRP: 7,8  CTE STANDARDS: 9.3.12.AG-ANI.7	How does an animal dentistry differ from human dentistry?  Why are dentals important for pets?	Oral examination.  Oral anatomy.  Preparation for dentals.  Dental prophylaxis.	Proper restraint for dental examination.  Identify normal teeth and problem teeth.  Explain dental formulas.  Pre-dentistry preparation.  Clean the teeth.  Select proper instruments.  Disinfect instruments.  Monitor patient post-procedure.	Practical and skills assessments.  Written tests/quizzes.  Practical exam demonstrating equipment use.  Practical exam demonstrating proper restraint.  Powerpoint explaining steps to a dental procedure and equipment use.

**Course: Introduction to Vet II**

**S2**

**Grade 9**

**Unit: Anatomy & Physiology**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLS: WHST:9-10.9 RST.9-10.4	What are the anatomical and physiological differences between mammalian species?	External anatomy, respiratory, renal, immune, and	Identification of body parts.  Explain and identify the	Written tests/quizzes.  Practical tests: labeling or oral



RST.9-10.5 RST.9-10.2 RST.9-10.6  CRP: 7,8,12  CTE STANDARDS: 9.3.12.AG-ANI.7	How do you identify illness in each body system?  How do you come up with a treatment plan?	gastrointestinal system.	function of organs in all body systems covered.  Explain pathologies of body systems.  Identify the species differences.	identification on a live animal.  Terminology packets.  Mosby's flashcards.  Terminology powerpoints.
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**Course: Introduction to Vet II**

**S2**

**Grade 9**

**Unit: Veterinary Terminology**

CTE Proficiencies	Essential Questions	Content	Skills	Assessments
WHST: 9-10.6 RST.9-10.4 RST.9-10.5  CRP: 7,8,12  CTE STANDARDS: 9.3.12.AG-ANI.7	What is the importance of understanding veterinary terminology?  How do you properly use veterinary terminology?	Anatomy & Physiology  Body Systems  Pharmacology  Hematology  Nursing  Pathology	Identify and define combining forms, prefixes, suffixes.  Correctly spell and pronounce veterinary medical terms.	Vocabulary quizzes from Quizlet.com, both instructor and student generated.  Terminology powerpoints.

**Course: Introduction to Vet II**

**S2**

**Grade 9**

**Unit: Grooming**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
<p>NJSLS:</p> <p>WHST.9-10.2 RST.9-10.3 RST.9-10.4 RST.9-10.5 WHST.9-10.4 WHST.9-10,6</p> <p>CRP: 1,2,6</p> <p>CTE STANDARDS: 9.3.12.AG-ANI.7 9.3.12.AG-ANI.5 9.3.12.AG-ANI.2</p>	<p>How does grooming aid in the health of an animal?</p> <p>Why is verbal communication important in the veterinary field?</p>	<p>Health Assessment</p> <p>Body Condition Score TPR</p>	<p>Use proper restraint techniques for various procedures.</p> <p>Clean ears and eyes. Take accurate weight and vitals.</p> <p>Clip nails.</p> <p>Bathe and shave; select appropriate grooming products and tools.</p> <p>Assist senior students with discharging pets.</p>	<p>Practical and skills assessments.</p> <p>Individual observations by instructor.</p>

**Course: Intro to Vet II**

**S2**

**Grade 9**

**Unit: Intro. to Pharmacology & Calculations**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
<p>NJSLS:</p> <p>RST.9-10.3 RST.9-10.4 RST.9-10.5</p>	<p>Why is it important to be able to read a prescription?</p> <p>How do you know how</p>	<p>Abbreviations</p> <p>Filling prescriptions (totals)</p> <p>Reading/writing</p>	<p>Use and interpret abbreviations.</p> <p>Translate prescription information to clients for</p>	<p>Practical and skills assessments.</p> <p>Written tests/quizzes.</p>

CRP: 1,9,12  CTE STANDARDS: 9.3.12.AG-ANI.7	much of a drug to administer?  How do you determine the route of administration?	prescriptions  Medication administration	understanding.  Properly give oral, injectable, topical, ophthalmic, and otic medications.	
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**Course: Intro to Vet II**

**S2**

**Grade 9**

**Unit: Dog and Cat Breeds**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLS:  RST.9-10.4 RST.9-10.5 RST.9-10.7 WHST.9-10.2 WHST.9-10.6  CRP: 7,8,12  CTE STANDARDS: 9.3.12.AG-ANI.1 9.312.AG-ANI.6	How do you identify a breed of a cat or dog?  How can you explain breed related problems to a client?	Common dog breeds.  Common cat breeds.  Breed related problems in dogs and cats.	Identify common dog breeds; purebred and mixed.  Identify common cat breeds; purebred and mixed.  Explain breed related medical and behavioral problems.	Practical and skills assessments.  Written tests/quizzes.  Create a poster explaining breed information.  Powerpoint presentations explaining breed information.

Course: Intro to Vet II

S2

Grade 9

Unit: Restraint of Small Animals

CTE Proficiencies	Essential Questions	Content	Skills	Assessments
NJSLS: RST.9-10.3 RST.9-10.4 RST.9-10.5  CRP: 2,5,12  CTE STANDARDS: 9.3.12.AG-ANI.2 9.312.AG-ANI.5 9.312.AG-ANI.7	How can an animal be restrained without being injured or injuring yourself?  When should you used additional restraint equipment?	Proper handling of small and exotic animals.  Removing animals from a cage or kennel.  Proper restraint of small and exotic animals for examination and surgery.	Perform various restraint positions.  Putting on a muzzle.  Use a rabies pole for fractious animals.  Use a cat bag for fractious felines.  Removing animals from cages or carriers.	Practical and skills assessments.  Written tests/quizzes.  Individual observation by instructor.

Course: Patient Management

S1

Grade 10

Unit: Diseases

CTE Proficiencies	Essential Questions	Content	Skills	Assessments
NJSLS: RST.9-10.4 RST.9-10.5  CRP: 5	How are diseases diagnosed and treated in an animal?  How do you protect	Small animal diseases.  Large animal diseases  Zoonosis	Explain signs, symptoms and treatment of diseases.  Diagnose diseases based on patient history.	Practical and skills assessments.  Written tests/quizzes.

CTE STANDARDS: 9.3.12.AG-ANI.7	yourself from zoonotic disease?		Explain how to prevent zoonotic disease spread.	Terminology packets.
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**Course: Patient Management**

**S1**

**Grade 10**

**Unit: Vaccines & Injections**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLS: RST.9-10.3 RST.9-10.4 RST.9-10.5  CRP: 1,6,7  CTE STANDARDS: 9.3.12.AG-ANI.2 9.3.12.AG-ANI.7	How do you decide which vaccines to prepare for an appointment?  What happens if vaccines are stored improperly?  How do you minimize patient stress when giving injections?	Vaccine reconstitution.  Vaccine storage and handling.  Vaccine administration routes.  Core vs. non-core vaccines.  Vaccine protocols.  Giving injections.	Properly reconstitute vaccines.  Properly handle and store vaccines.  Give vaccines via the correct route.  Explain core and non-core vaccines to clients.  Decide which vaccines to prepare based on proper protocol.	Practical and skills assessments.  Written tests/quizzes.  Terminology packets.  Practical - giving injections  Practical - vaccine reconstitution

			Use aseptic technique to give injections.	
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**Course: Patient Management**

**S1**

**Grade 10**

**Unit: Patient History**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLS: RST.9-10.3 RST.9-10.4 RST.9-10.5  CRP: 1,2,4  CTE STANDARDS: 9.3.12.AG-ANI.2 9.3.12.AG-ANI.7	How do you know what questions to ask during a patient history?  How can you keep appointments running on time?	Patient history questions.  Differences between well and sick appointments/history.  Prioritizing patient issues and client questions.  Signalment	Ask appropriate questions during patient history based on reason for visit.  Determine what is needed for the veterinary examination.  Keep appointments running on time by prioritizing issues.	Practical and skills assessments.  Written tests/quizzes.  Practical - taking a patient history.  Role playing - client and vet tech taking a history

**Course: Patient Management**

**S1**

**Grade 10**

**Unit: Preventive Medications**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>

<p>NJSLS: RST.9-10.3 RST.9-10.4 RST.9-10.5 WHST.9-10.2</p> <p>CRP:4,5,8</p> <p>CTE STANDARDS: 9.3.12.AG-ANI.2 9.3.12.AG-ANI.7</p>	<p>What happens if you don't use preventive medications as directed?</p> <p>How do you decide which preventive medication to recommend?</p>	<p>Differences between flea/tick medication brands.</p> <p>Preventive medication administration. Importance of proper administration.</p>	<p>Determine the best preventive medication based on the patient's lifestyle.</p> <p>Properly apply preventive medications.</p> <p>Explain how to use preventive medications at home.</p>	<p>Practical and skills assessments.</p> <p>Written tests/quizzes.</p> <p>Practical - applying flea/tick medication.</p> <p>Practical - giving heartworm medication.</p> <p>Poster - brands of flea/tick and heartworm medication.</p>
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**Course: Intro to Vet Nursing**

**S1 & 2**

**Grade 10 or 11**

**Unit: Instrumentation**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
<p>NJSLS: RST.9-10.3 RST.9-10.4 RST.9-10.5 WHST.9-10.2 WHST.9-10.4 WHST.9-10.6</p> <p>CRP:1,2</p>	<p>Why do you have to sterilize instruments?</p> <p>How do you tell the difference between similar instruments?</p> <p>Why do vet techs need to know how to</p>	<p>Surgical instruments</p> <p>Dental instruments</p> <p>Sterilization</p>	<p>Identify surgical/dental instruments and their function.</p> <p>Properly clean and disinfect instruments.</p> <p>Sterilize instruments in single pouches and in packs.</p>	<p>Practical and skills assessments.</p> <p>Written tests/quizzes.</p> <p>Practical - instrument identification.</p> <p>Practical - using the autoclave.</p>

CTE STANDARDS: 9.3.12.AG-ANI.7	identify instruments?			Powerpoint - instrument functions.
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**Course: Intro to Vet Nursing**

**S1 & 2**

**Grade 10 or 11**

**Unit: Surgical Assisting**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLS: RST.9-10.2 RST.9-10.3 RST.9-10.4 RST.9-10.5 WHST.9-10.2 WHST.9-10.2 WHST.9-10.4 WHST.9-10.6  CRP: 2,5,6  CTE STANDARDS: 9.3.12.AG-ANI.7	What is the role of the vet tech in the operating room?  Why is sterile technique important for surgery?  How can improper technique affect the outcome of a surgery?	Gowning/Gloving  Giving injections  Suturing  Patient positioning  Patient preparation	Demonstrate how to put on sterile gloves and gowns using sterile technique.  Properly give pre-anesthetic injections.  Perform basic suture techniques.  Position a sedated patient for spay surgery.  Describe operating room conduct.  Explain how to clean the operating room.	Practical and skills assessments.  Written tests/quizzes.  Practical - prepare a patient for a spay surgery; including positioning  Practical - suturing techniques  Powerpoint - operating room conduct and disinfection



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**Course: Intro to Vet Nursing**

**S1 & 2**

**Grade 10 or 11**

**Unit: Asepsis/Sterilization**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLS: RST.9-10.2 RST.9-10.3 RST.9-10.4 RST.9-10.5  CRP: 2,5,6  CTE STANDARDS: 9.3.12.AG-ANI.7	What is the difference between aseptic and sterile technique?  When do you use aseptic technique vs sterile technique?  How can improper technique affect the outcome of a surgery?	Aseptic Technique  Sterile Technique	Surgical hand scrub.  Prepare a patient for spay surgery.  Describe how to clean the operating room after a surgery.	Practical and skills assessments.  Written tests/quizzes.  Practical - prepare a patient for spay  Practical - hand scrub

**Course: Intro to Vet Nursing**

**S1 & 2**

**Grade 10 or 11**

**Unit: Emergency Medicine**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLS:	How do you prioritize	Triage	Define and correctly spell key	Practical and skills

RST.9-10.2 RST.9-10.3 RST.9-10.4 RST.9-10.5  CRP: 2,4,12  CTE STANDARDS: 9.3.12.AG-ANI.7	emergency patients?  When do you perform CPR?	Monitoring emergency patients  Emergency treatments  First Aid  CPR	terms.  Perform triage/patient assessment. Describe how to monitor emergency patients.  Demonstrate basic first aid procedures.  Perform and explain CPR	assessments.  Written tests/quizzes.  Practical - triage  Practical - first aid  Practical - canine CPR  Terminology packets  Student teacher critique on techniques.
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**Course: Intro to Vet Nursing**

**S1 & 2**

**Grade 10 or 11**

**Unit: Reproduction/Urinary Syst.**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLS: RST.9-10.3 RST.9-10.4 RST.9-10.5 RST.9-10.7  WHST.9-10.2 WHST.9-10.4 WHST.9-10.6  CRP: 1,2,8	What are the similarities and differences of the reproductive system in human and animal anatomy?  How is a pyometra treated?  What are the behavioral changes of an animal in	Reproductive organs of male and females  Functions of organs  Gestation periods of small and large animals  Nesting habits	Identify reproductive organs-externally and internally  Explain how to assist veterinarian in delivery of litter via natural or cesarean  Describe how female prepares for litter	Practical-locate external organs  Research paper on pros and cons of spaying and neutering pet  Written tests/quizzes

<p>CTE STANDARDS: 9.3.12.AG-ANI.4 9.3.12.AG-ANI.7</p>	<p>heat?</p> <p>What problems are seen in parturition?</p> <p>How does an animal urinate?</p> <p>What are the ways by which a urine sample can be obtained?</p> <p>What laboratory studies can be performed on a urine sample in a hospital?</p> <p>How does an assistant aid in the procedures to unblock a cat?</p> <p>Why is a change in the diet of an animal that cannot urinate correctly necessary?</p>	<p>Infections of the reproductive system</p> <p>Dystocia</p> <p>Cesarean birth</p> <p>Organs of the urinary system</p> <p>Functions of organs</p> <p>Free catch</p> <p>Urinalysis</p> <p>UTI (urinary tract infection)</p> <p>Multistix</p> <p>Cystocentesis</p> <p>Blocked cat/dog</p> <p>Medications</p> <p>Stones</p> <p>Urinary Catheterization</p> <p>Corrective surgery</p> <p>Urethrostomy</p> <p>Diet changes</p>	<p>Describe physical changes of female through gestation</p> <p>Identify female and male organs of the urinary system</p> <p>Describe functions of both sexes organs</p> <p>Describe symptoms of a blocked animal</p> <p>Collect midstream urine from animal</p> <p>Dip and read Multistix</p> <p>Describe procedure for a cystocentesis</p> <p>Explain medications used to treat UTI</p> <p>Explain different types of crystals and stones found in animals</p> <p>Explain how to catheterize a cat and dog</p> <p>Describe surgeries to remove stones</p> <p>Describe a urethrostomy</p>	<p>Practical -locate external and internal organs</p> <p>Practical-perform free catch</p> <p>Read Multistix</p> <p>Practical-perform cystocentesis on stuffed animals</p>
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			Explain different diets from different manufacturers to dissolve crystals and prevent recurrence of blockage	
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**Course: Clinical Sciences**

**S2**

**Grade 10**

**Unit: Receptionist Skills**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLS: RST.9-10.4 RST.9-10.5 RST.9-10.6 WHST.9-10.2 WHST.9-10.4  CRP: 4,7,8  CTE STANDARDS: 9.3.12.AG-ANI.7	What information is necessary to make an appointment for a client?  How is client/patient information uploaded to veterinary software?  How does a filing system work in a veterinary office?  Why does the receptionist explain the procedures for medications and surgery?	Answering phones  Making appointments  Filing  Cornerstone Software  Client Education	Speaking clearly and listening for information from client  Collecting information from clients to make proper time allotment for procedures for appointment  Collecting basic information from client on self and pet for computer and chart  Creating client/patient files in computer  Updating patient information  Use Veterinary software to add clients and patients to computer	Students role play as client and receptionist  Practical using computer and paper chart and skills assessments.  Written tests/quizzes.

			Explain instructions from chart to patient	
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**Course: Clinical Sciences**

**S2**

**Grade 10**

**Unit: Admitting/Discharging Clients**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLS: RST.9-10.4 RST.9-10.5  CRP:2,4  CTE STANDARDS: 9.3.12.AG-ANI.7	What is the safest way to admit a pet to a clinic?  How is a pet released from a clinic to a client?  What sanitation protocol is followed to disinfect a cage or run?	Taking clients through reception process  Admitting animal  Discharging pet to client  Sanitation	Collect information from client at reception desk  Leashing pet from client and placing and locking in a cage or run  Retrieving pet from cage or run  Explaining procedures performed on pet  Cleaning cage or run	Practical admitting/discharging pets  Practical sanitizing cages and run Written tests/quizzes

Course: Clinical Sciences

S2

Grade 10 or 11th

Unit: Microscope

CTE Proficiencies	Essential Questions	Content	Skills	Assessments
NJSLS: RST.9-10.4 RST.9-10.5 WHST.9-10.2 WHST.9-10.2 WHST.9-10.4 WHST.9-10.6  CRP: 1,2,7  CTE STANDARDS: 9.3.12.AG-ANI.7	How does a microscope function?  What are the common eggs found in a young or older animal?  Why is a skin scraping procedure necessary in the diagnosis of a mite?	Parts of the microscope  Fecal flotations  Fecal smears  Life cycles of parasites  How to view eggs through a microscope  Skin scraping for parasites  Zoonosis	Focus microscope  Set-up fecalyzer kit  Use fecal loop for smears  Explain zoonotic implications of parasites  Prep animal for scraping  Read skin scraping	Set-up microscope with slide and coverslip  Read slide with egg or skin scraping Powerpoint presentation  Written tests/quizzes

Course: Clinical Sciences

S2

Grade 10 or 11th

Unit: Medications/Treatment

CTE Proficiencies	Essential Questions	Content	Skills	Assessments
NJSLS:	How do you know	Preventative	Explain application and	Practical applying simulated

<p>RST.9-10.4 RST.9-10.5 RST.9-10.9 WHST.9-10.2 WHST.9-10.4 WHST.9-10.6</p> <p>CRP: 2,4</p> <p>CTE STANDARDS: 9.3.12.AG-ANI.7</p>	<p>which products to recommend to clients?</p> <p>What questions would you ask a client to help determine proper treatment?</p>	<p>Treatment</p>	<p>dosage of topical and oral drugs given monthly to prevent diseases of infestations of endo and ecto parasites</p> <p>Explain different types of treatments for parasites</p>	<p>medication on pets</p> <p>Research side effects of prophylactics</p>
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**Course: Advanced Vet Nursing**

**S1**

**Grade 11 or 12**

**Unit: IV Catheters**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
<p>NJSLS: RST.11-12.2 RST.11-12.4</p> <p>WHST.11-12.2</p> <p>CRP: 2,4,9</p> <p>CTE STANDARDS: 9.3.12.AG-ANI.7</p>	<p>How do you know which catheter to select?</p> <p>How can you prevent a patient from chewing on the catheter?</p>	<p>Catheter types and sizes</p> <p>Catheter placement</p> <p>Management of IV catheters</p>	<p>Select appropriate IV catheter based on patient size/status.</p> <p>Correctly place a catheter into cephalic vein.</p> <p>Secure IV catheter and describe management techniques.</p>	<p>Practical and skills assessments.</p> <p>Written tests/quizzes.</p> <p>Practical - catheter placement</p> <p>Oral test - monitoring patients with catheters</p>

			Describe how to monitor a patient with a catheter.	
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**Course: Advanced Vet Nursing**

**S1**

**Grade 11 or 12**

**Unit: Fluid Therapy**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLS: RST.11-12.2 RST.11-12.3 RST.11-12.4  WHST.11-12.6  CRP: 1,2,4  CTE STANDARDS: 9.3.12.AG-ANI.7	When does an animal need IV fluid therapy?  How do you assess hydration status during visual examination?	Providing IV fluid therapy  Assessing hydration status  Calculations	Set up IV fluids using sterile technique.  Visually assess an animal's hydration status and determine the course of fluid therapy.  Describe the different types of IV fluids.  Calculate drip rates.  Calculate rehydration amounts.	Practical and skills assessments.  Written tests/quizzes.  Practical - IV fluid set up.  Written - calculate drip rates and rehydration amounts.

**Course: Advanced Vet Nursing**

**S1**

**Grade 11 or 12**

**Unit: Wound Healing and Bandaging**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLS:	What happens during the	Phases of wound healing.	Explain what happens	Practical and skills



RST.11-12.2 RST.11-12.3 WHST.11-12.2 WHST.11-12.4 WHST.11-12.6  CRP: 4,6,7  CTE STANDARDS: 9.3.12.AG-ANI.7	phases of wound healing?  How do you know if a bandage is applied properly?	Types of trauma.  Treatment for wounds.  Bandaging techniques.	during the phases of wound healing.  Describe the different types of wounds and how to treat them.  Perform a Robert Jones, Modified Robert Jones, Lateral Splint, and Spika Splint.  Explain why the different bandaging techniques are needed.	assessments.  Written tests/quizzes.  Practical - bandaging techniques  Brochure - phases of wound healing  Terminology packet
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**Course: Advanced Vet Nursing**

**S1**

**Grade 11 or 12**

**Unit: Euthanasia**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLS: RST.11-12.2 WHST.11-12.2 WHST.11-12.4  CRP: 4,7  CTE STANDARDS: 9.3.12.AG-ANI.7	What happens during the phases of euthanasia?  How do you console a client who is euthanizing a pet?  When is euthanasia not recommended?	Phases of euthanasia  Grief process  Euthanasia procedures and etiquette  Disposing of a body  Options for clients	Explain what happens during the phases of euthanasia.  Explain the grief process.  Discuss how to properly dispose of a body.  Discuss options for clients after a pet's death.	Practical and skills assessments.  Written tests/quizzes.  Debate: Should a veterinarian ever refuse to euthanize a pet?  Peer discussion involving ethical issues.

				Google Classroom discussion - Belkers story
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**Course: Advanced Vet Nursing**

**S1**

**Grade 11 or 12**

**Unit: Anesthesia**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLS: RST.11-12.2 RST.11-12.3 WHST.11-12.2 WHST.11-12.4 WHST.11-12.6  CRP: 1,2,4  CTE STANDARDS: 9.3.12.AG-ANI.7	What drugs are used to tranquilize or anesthetize a pet?  How do anesthetic drugs affect the body of the pet?  How is a pet monitored while it is anesthetized?  Why are reversal agents necessary after surgery?	Types of anesthesia  Body's response to anesthesia  Precautions  Methods to induce anesthetic plane  Reversal agents	Explain different types of tranquilizers and anesthetics  Explain different categories for drugs  Explain scavenger system  Explain function of machines used to maintain anesthetic plane  Explain monitor system of pet	Practical and skills assessments.  Written tests/quizzes.  Research paper on the pros and cons of reversal agents

**Course: Advanced Vet Nursing**

**S1**

**Grade 11 or 12**

**Unit: Endocrinology**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLS: RST.11-12.2 RST.11-12.3 WHST.11-12.2 WHST.11-12.4 WHST.11-12.6  CRP: 4,7  CTE STANDARDS: 9.3.12.AG-ANI.7	How do hormones affect a pet?  What diseases are directly related to the hormones of animals?  How are the endocrine diseases diagnosed?  What drugs are used to treat the diseases? How can some of these diseases be prevented?	Organs of the endocrine system  Organs that control hormones  Common diseases seen in animals  Symptoms Diagnostic tools Treatment Prevention	Explain functions of different hormones  Describe symptoms of diseases using medical terms  Describe diagnostic tests confirming illness  Describe treatments and side effects of medications  Describe prevention of diseases	Practical and skills assessments.  Written tests/quizzes.  Charades-students research a disease and then act it out so other students hypothesize disease

**Course: Advanced Vet Nursing**

**S1**

**Grade 11 or 12**

**Unit:Resume/Cover letter**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLS:	How is a resume written?	Set up resume template	Create template with	Practical- create resume and cover

RST.11-12.2 WHST.11-12.2 WHST.11-12.4 WHST.11-12.6  CRP: 10  CTE STANDARDS: 9.3.12.AG-ANI.1	What is the purpose of a cover letter?	Basic information about potential employee  Education  Skills	information about employee adding education and skill sets  Create cover letter	letter for a veterinary hospital  Written tests/quizzes.
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**Course: Advanced Vet Nursing**

**S1**

**Grade 11 or 12**

**Unit:Career exploration**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLS: RST.11-12.2 WHST.11-12.2 WHST.11-12.4 WHST.11-12.6  CRP: 10  CTE STANDARDS: 9.3.12.AG-ANI.1	What job opportunities are available for a veterinary assistant?  What are the educational qualifications for advancement?	Employment options for graduating students that go directly to work or to college In veterinary hospitals, kennels, research, animal parks	Talk with potential employees for job opportunities  Use internet employment sites for jobs	Research paper on job requirements.  Written tests/quizzes

**Course: Emergency and Critical Care**

**Grade: 9th or 11th**

**S2**

**Unit: Prescriptions/Drugs**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLs: RST.11-12.4 RST.11-12.5 RST.11-12.7 RST.11-12.9 WHST.11-12.4 WHST.11-12.6 WHST.11-12.9  CRP: 1,2,4  CTE STANDARDS: 9.3.12.AG-ANI.7	How are controlled substances different from other drugs?  How do you know what drugs treat which illnesses?	Reading and interpreting prescriptions.  Drug classes.  Controlled substances	Read and interpret more complicated prescriptions.  Describe the drug classes and give examples of each.  Explain how controlled substances are handled and stored.	Written tests/quizzes  Practical - interpret and fill prescriptions  Essay - research a drug

**Course: Emergency and Critical Care**

**Grade: 9th or 11th**

**S2**

**Unit: Calculations**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLS: RST.11-12.2 RST.11-12.4 RST.11-12.5  CRP: 8  CTE STANDARDS: 9.3.12.AG-ANI.7	Why is it important for vet techs to be able to calculate dosages?  What happens if you miscalculate?	Conversions  Dosage calculations	Convert weights  Metric conversions Calculate dosages.  Calculate fluid amounts	Written tests/quizzes  Practical - calculate dosages

**Course: Emergency and Critical Care**

**Grade: 11**

**S2**

**Unit: Blood Cells**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLS: RST.11-12.2 RST.11-12.4 WHST.11-12.2 WHST.11-12.6	How does blood cell health affect the overall health of an animal?  How do you know	Blood cell types  Blood cell formation  Blood cell pathology	Identify and describe all blood cell types.  Explain how and where blood cells are formed.	Written tests/quizzes  Project - 3D diagram of blood cells

CRP: 1,2,4,6  CTE STANDARDS: 9.3.12.AG-ANI.7	the difference between healthy and pathologic blood cells?		Describe how blood cell changes can indicate pathology.	
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**Course: Emergency and Critical Care**

**Grade: 11**

**S2**

**Unit: Laboratory Testing**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLS: RST.11-12.2 RST.11-12.3 RST.11-12.4 WHST.11-12.4 WHST.11-12.6  CRP: 2,5,8  CTE STANDARDS: 9.3.12.AG-ANI.2 9.3.12.AG-ANI.7	How does blood cell health affect the overall health of an animal?  Why is it important to know how to run bloodwork in the clinic?	Performing lab tests  Reading results  Recording results	Perform and read a blood smear  Use VetTest machine for blood chemistries.  Run a packed cell volume and read results.  Perform a total protein test and read results	Written tests/quizzes  Practical - run and read a PCV  Practical - blood smear  Practical - blood chemistry  Practical - Recording results

**Course: Emergency and Critical Care**

**Grade: 11**

**S2**

**Unit: Equipment**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLS: RST.11-12.2 RST.11-12.3 RST.11-12.4 WHST.11-12.6  CRP: 2,5,8  CTE STANDARDS: 9.3.12.AG-ANI.7	What impact will malfunctioning or improperly used equipment have on blood test results?	Proper use of centrifuge.  Proper use of VetTest machine.  Protection from blood and bodily fluids.  Disposal.	Use and clean the centrifuge.  Use and clean the VetTest.  Use and clean the refractometer.  Proper use of gloves and PPE.  Proper disposal of sharps.	Written tests/quizzes  Practical - use centrifuge  Practical - use VetTest  Practical - use refractometer

**Course: Nutrition**

**Grade: 10 or 12**

**S1 or 2**

**Unit: Nutrients**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLS: RST.11-12.2 RST.11-12.3 WHST.11-12.2 WHST.11-12.4 WHST.11-12.6  CRP: 2,5,7	Are diets the same for all animals?  What are the nutrient classes?	Nutrient classes  Nutrient requirements  Species variation	Describe the 6 nutrient classes.  Explain nutrient requirements for different species.  Explain special dietary requirements for various species.	Written tests/quizzes  Research project - nutrient requirements for one species



CTE STANDARDS: 9.3.12.AG-ANI.3 9.3.12.AG-ANI.7				
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**Course: Nutrition**

**Grade: 10 or 12**

**S1 or 2**

**Unit: Feeding Methods**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLS: RST.11-12.4 RST.11-12.5 WHST.11-12.2 WHST.11-12.4  CRP: 7,11  CTE STANDARDS: 9.3.12.AG-ANI.3 9.3.12.AG-ANI.7	Why are there multiple feeding methods?  How do you know which feeding method is best?	Free choice  Quantity restricted  Time restricted  Species variation	Describe the types of feeding methods.  Explain the pros and cons of the feeding methods.  Explain the restrictions that certain species present for different feeding methods.  Explain the best feeding method for different species.	Written tests/quizzes  Project - research and present the appropriate feeding method for a given species

Course: Nutrition

Grade: 10 or 12

S1 or 2

Unit: Diet Formulation

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLS: RST.11-12.4 RST.11-12.5 RST.11-12.2 RST.11-12.3  CRP: 2,12  CTE STANDARDS: 9.3.12.AG-ANI.3 9.3.12.AG-ANI.7	Are diets the same for all animals?  What happens if you incorrectly formulate a diet?	Types of feed  Diet variations  Species requirements	Identify types of food.  Explain the variations in diets from one species to another.  Formulate a diet for a given species.	Written tests/quizzes  Practical - diet formulation

CTE Proficiencies	Essential Questions	Content	Skills	Assessments
<p>NJSLS: RST.11-12.2 RST.11-12.3 RST.11-12.4 WHST.11-12.2 WHST.11-12.6</p> <p>CRP: 1,2,5,8</p> <p>CTE STANDARDS: 9.3.12.AG-ANI.1 9.3.12.AG-ANI.2 9.3.12.AG-ANI.5 9.3.12.AG-ANI.7</p>	<p>How does an x ray machine or ultrasound take views of the body?</p> <p>How is an assistant protected from radiation during an x ray?</p> <p>Why is an ultrasound safer for the assistant than a radiograph?</p> <p>Why is the correct position of the pet vital to reading an x ray or ultrasound?</p>	<p>PPE Machine usage Machine maintenance Preparation of pet Body positioning Restraint methods Restraint aides Reading images Anesthetic aides Film Digital</p>	<p>Placement of dosimeter,lead gloves,apron,thyroid collar</p> <p>Explain how to use x ray machine and ultrasound</p> <p>Explain reasons for shaving for ultrasound</p> <p>Demonstrate restraint holds for different views of body</p> <p>Explain usage of blocks for positioning</p> <p>Explain usage of tranquilizers and anesthetics for control of body for radiograph view</p> <p>Read actual films Read sections of ultrasound</p>	<p>Written tests/quizzes</p> <p>Practical -Students create a simulated cassette with an x ray</p> <p>Practical- students use tables to demonstrate restraint methods for different views of body</p> <p>Poster demonstrating an orthopedic problem and then symptoms,diagnosis, treatments, and medications along with prevention</p>

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
NJSLS: RST.11-12.2 WHST.11-12.2 WHST.11-12.4 WHST.11-12.6  CRP: 2,4,5  CTE STANDARDS: 9.3.12.AG-ANI.1 9.3.12.AG-ANI.2 9.3.12.AG-ANI.5 9.3.12.AG-ANI.7	How is medical terminology broken down for the understanding of the client?  How is an animal restrained for examinations and x rays?  What are the safety procedures when examining stool or urine?  Why is it necessary to groom an animal?	General terminology  Restraint  Laboratory Procedures  Radiology  Medicinal grooming	Explain veterinary terms to an owner of a pet  Demonstrate restraining small and large animals  Set up and read stool and urine samples  Describe proper PPE and safety for the radiology room.  Explain how to bathe/dip using proper protocol.	Completion of online video training.  Completion of review questions for each unit.  Individual observation by instructor.

**Course: CVA**

**S2**

**Grade 12**

**Unit: 6-10**

<b>CTE Proficiencies</b>	<b>Essential Questions</b>	<b>Content</b>	<b>Skills</b>	<b>Assessments</b>
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<p>NJSLS:</p> <p>WHST.11-12.2 WHST.11-12.4 WHST.11-12.6</p> <p>CRP: 1,2,8</p> <p>CTE STANDARDS: 9.3.12.AG-ANI.1 9.3.12.AG-ANI.2 9.3.12.AG-ANI.3 9.3.12.AG-ANI.4 9.3.12.AG-ANI.5 9.3.12.AG-ANI.6 9.3.12.AG-ANI.7</p>	<p>What are the main characteristics for different breeds?</p> <p>What are the instruments necessary for a spay/neuter?</p> <p>How are drugs administered?</p> <p>How does a hospital find and keep their clients?</p> <p>What is teamwork and why is it important?</p>	<p>Breeds</p> <p>Surgery</p> <p>Drugs</p> <p>Clients</p> <p>Teamwork</p> <p>Practical Exam</p> <p>Final Exam</p>	<p>Identify animal breeds.</p> <p>Prepare instrument packs.</p> <p>Administer drugs via different routes.</p> <p>Explain how a hospital finds and keeps its clients.</p> <p>Use teamwork skills when working together.</p>	<p>Completion of online video training.</p> <p>Completion of review questions for each unit.</p> <p>Individual observation by instructor.</p> <p>Practical skills test.</p> <p>National certification test.</p>
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## V. Resources and Supplemental Materials

McCurnin's Clinical Textbook for Veterinary Technicians. 9th ed. Joanna M. Bassert VMD & John Thomas DVM. ISBN: 978-0-323-39461-1. Copyright 2018

McCurnin's Clinical Textbook for Veterinary Technicians - Workbook. 9th ed. Joanna M. Bassert VMD & John Thomas DVM. ISBN: 9781455726714. Copyright 2018

Elsevier's Veterinary Assisting Textbook. 2nd ed. Margi Sirois. ISBN:978-0-323-35922-1. Copyright 2017

Workbook for Elsevier's Veterinary Assisting Textbook. 2nd ed. Margi Sirois. ISBN: 978-0-323-37710-2

Veterinary Medical Terminology. 2nd ed. Dawn E. Christenson LVT. ISBN: 9780721697260. Copyright 2009

Learning Veterinary Terminology. 2nd ed. Douglas F. McBride DVM. ISBN: 9780323013291. Copyright 2002

Illustrated Guide to Veterinary Terminology. 4th ed. Janet Romich. ISBN: 9781133125761. Copyright 2015

Veterinary Instruments and Equipment - A Pocket Guide. 3rd ed. Teresa F. Sonsthagen. ISBN: 9780323263139. 2005

Fundamentals of Pharmacology for Veterinary Technicians. Janet Romich. ISBN: 9781401842932. 2004

Dosage Calculations. 8th ed. Gloria Pickar. ISBN: 9781418080471. 2007.

Veterinary Anatomy and Physiology. 2nd ed. Phillip E. Cochran. ISBN: 9781435464339. 2011

Introduction to Veterinary Science. 2nd ed. Lawhead, Baker. ISBN - 13: 978-4283-1255-8