

Veterinary Technician Associate Degree

Financial Aid Available

The Veterinary Technician Associate Degree program will prepare learners with the skills necessary to provide medical and nursing care for a variety of animal species including dogs, cats, cattle, birds, pigs, small mammals, horses, and reptiles. Classroom instruction is combined with hands-on learning opportunities to expose learners to the essential functions and skills they will need to be successful in this career. Learners will have the opportunity to work closely with the NTC dairy farm operation and take several classes concentrating on dairy medicine and will also complete an internship in a veterinary practice to apply their learning in real world situations. Jobs in this field are generally physical and require the strength to lift and carry 50 pounds. Learners interested in this career should have a strong background in biological sciences. Additionally, learners looking to be successful in this occupation should have the aptitude to work with animals, possess good oral and written communication skills, and have excellent analytical and critical thinking skills.

Graduates of the Veterinary Technician Program will be able to:

- Manage veterinary business functions
- Integrate all aspects of patient management for anesthetic, surgical, and medical nursing procedures
- Produce diagnostic radiographic images
- Perform laboratory procedures
- Administer prescribed drugs

Credits earned at NTC may transfer to four-year colleges and universities. Visit www.ntc.edu for a complete listing of transfer opportunities for this program.

CURRICULUM

FIRST SEMESTER

10-091-172	VETERINARY MEDICAL TERMINOLOGY ^{^^}	1 credit
10-091-174	VETERINARY OFFICE PROCEDURES ^{***^}	2 credits
10-091-200	ANIMAL MANAGEMENT ^{**^^}	3 credits
10-091-204	ORIENTATION TO VETERINARY STUDIES ^{**^^}	1 credit
10-091-205	VETERINARY TECHNICIAN CALCULATIONS ^{***^}	1 credit
10-091-210	EQUINE HANDLING AND BEHAVIOR 1 ^{^^}	1 credit
10-091-214	VERTEBRATE ANATOMY & PHYSIOLOGY 1 ^{^^}	3 credits
10-091-215	VERTEBRATE ANATOMY & PHYSIOLOGY 2 ^{**^^}	3 credits
10-806-197	MICROBIOLOGY ^{***^}	4 credits
Total		19 credits

SECOND SEMESTER

10-091-126	COMPANION ANIMAL & EQUINE DISEASES ^{**^^}	3 credits
10-091-193	ANIMAL NURSING 1 ^{**^^}	3 credits
10-091-196	CLINICAL PATHOLOGY 1 ^{**^^}	2 credits
10-091-211	VETERINARY PHARMACOLOGY 1 ^{**^^}	2 credits
10-091-217	DAIRY NUTRITION ^{**^^}	2 credits
10-091-218	BOVINE REPRODUCTION ^{**^^}	2 credits

PROGRAM COURSE DESCRIPTIONS:

10-091-172	VETERINARY MEDICAL TERMINOLOGY	1 credits
Develop an understanding of acceptable veterinary medical terminology for common clinically recognizable diseases, operations, systems and procedures. Further, learners will distinguish common medical signs, abbreviations and colloquial vocabulary. Medical terms and language is covered as it relates to the animal's body as a whole.		
10-091-174	VETERINARY OFFICE PROCEDURES	2 credits
Introduces personal and professional characteristics and qualities expected of a veterinary assistant. This course covers the development of appropriate public, client and staff relations, telephone etiquette, making appointments, managing records, client services and education, and personal grooming and attire. Laws and ethics regarding the practice of veterinary medicine, legal requirements for record keeping and veterinary practice management software will also be covered. <i>Prerequisites:</i> 10-091-214 VERTEBRATE ANATOMY & PHYSIOLOGY 1 and 10-091-172 VETERINARY MEDICAL TERMINOLOGY.		
10-091-200	ANIMAL MANAGEMENT	3 credits
Learners will study behavior of common domestic animals and factors that can influence or change that behavior. Handling and husbandry of animals commonly seen in veterinary practice including nutrition, restraint, basic procedures and housing requirements. Learners will also explore the laws and regulations pertaining to animal care and housing. <i>Prerequisites:</i> 10-091-214 VERTEBRATE ANATOMY & PHYSIOLOGY 1 and 10-091-172 VETERINARY MEDICAL TERMINOLOGY.		
10-091-204	ORIENTATION TO VETERINARY STUDIES	1 credits
Familiarizes learner with the Agriculture Center of Excellence and standard operating procedures. Learners will explore career opportunities in the veterinary medical field. Course discussion will cover requirements for licensing and the scope of practice for veterinary technicians, professional organizations and career challenges. Part of this course will be held in the dairy barn at the Agriculture Center for Excellence. <i>Prerequisites:</i> 10-091-172 VETERINARY MEDICAL TERMINOLOGY and 10-091-214 VERTEBRATE ANATOMY & PHYSIOLOGY 1.		
10-091-205	VETERINARY TECHNICIAN CALCULATIONS	1 credits
Learn how to accurately perform the every day medical calculations used in veterinary medicine. Learners will perform metric conversions, calculate drug dosages and fluid rates and practice filling prescriptions. <i>Prerequisites:</i> 10-091-172 VETERINARY MEDICAL TERMINOLOGY and 10-091-214 VERTEBRATE ANATOMY & PHYSIOLOGY 1.		
10-091-210	EQUINE HANDLING AND BEHAVIOR 1	1 credits
Introduces the student to the normal behavior of the horse and emphasizes the proper way to handle		

Total	14 credits
THIRD SEMESTER	
10-091-212 VETERINARY TECHNICIAN INTERNSHIP***^	4 credits
10-801-196 ORAL/INTERPERSONAL COMMUNICATION^^	3 credits
Total	7 credits
FOURTH SEMESTER	
10-091-206 CLINICAL PATHOLOGY 2***^	3 credits
10-091-207 EQUINE HEALTH MANAGEMENT^^	1 credit
10-091-208 ANIMAL NURSING 2***^	3 credits
10-091-213 VETERINARY PHARMACOLOGY 2***^	2 credits
10-809-172 INTRODUCTION TO DIVERSITY STUDIES^^	3 credits
or	
10-809-196 INTRO TO SOCIOLOGY	3 credits
Total	12 credits
FIFTH SEMESTER	
10-091-123 LIVESTOCK DISEASES****	2 credits
10-091-199 ANIMAL RESEARCH METHODS - AALAS****	2 credits
10-091-209 ANIMAL NURSING 3***^	3 credits
10-801-195 WRITTEN COMMUNICATION ♦ ^^	3 credits
or	
10-801-136 ENGLISH COMPOSITION 1 ♦	3 credits
10-809-199 PSYCHOLOGY OF HUMAN RELATIONS^^	3 credits
or	
10-809-198 INTRO TO PSYCHOLOGY	3 credits
Total	13 credits
Total Credits Required for Graduation	65 credits

** Requires prerequisite or corequisite course(s), or specific condition. Refer to Course Descriptions for list of courses or specific condition required.

♦ Courses listed may transfer as a General Education course equivalent or as a general education elective. Please discuss your transfer goals with a NTC Transfer Advising Specialist who will review the four year college program requirements for your major. It is beneficial to discuss course selection prior to enrollment.

^^ Learner must have at least a 2.0 GPA ("C") or better in this course to graduate.

the horse in a variety of situations. Additional topics include equine social behavior, body language and their learning process. The better a horse's conformation, the better it will be able to perform; therefore, this course will also include basic anatomy and conformation. Learners will study horse-human interaction and utilize safe animal handling techniques as they work with the animals and learn how to use horse care equipment.

10-091-214 VERTEBRATE ANATOMY & PHYSIOLOGY 1 3 credits

Learners will examine anatomical structures with an emphasis on identification, correct terminology, and the relationship between organ systems. Through lecture and dissection labs, learners will establish a foundational knowledge of anatomy to allow further study in physiology and pathology of diseases in common domestic species.

10-091-215 VERTEBRATE ANATOMY & PHYSIOLOGY 2 3 credits

Builds on learning from Vertebrate Anatomy & Physiology 1 to further investigate how body systems function in health, and how disfunction causes disease. *Prerequisites: 10-091-214 VERTEBRATE ANATOMY & PHYSIOLOGY 1 and 10-091-172 VETERINARY MEDICAL TERMINOLOGY.*

10-091-126 COMPANION ANIMAL & EQUINE DISEASES 3 credits

Applies medical terminology, anatomy and physiology, and directional terminology as it relates to disease processes. Focuses on disease etiology, symptoms, transmission, diagnosis, prevention, and control as it relates to companion animal and equine diseases. Learners will examine the impact of various diseases to properly handle diagnostic samples. Toxic plants and other substances, as well as, reporting and monitoring of federally regulated diseases will be explored. *Condition: Must be accepted in the Veterinary Science Associate Degree or Veterinary Technician Associate Degree, or with Dean approval.*

10-091-193 ANIMAL NURSING 1 3 credits

Introduces the basics of animal nursing including patient history, restraint for medical procedures, and preventative medicine on both large and small animal patients. Includes preparation and administration of medications and vaccinations, care of hospitalized patients, wound management, client education, diagnostic imaging, and small animal nutrition. *Prerequisite: 10-091-172 VETERINARY MEDICAL TERMINOLOGY.*

10-091-196 CLINICAL PATHOLOGY 1 2 credits

Applies the principles of veterinary clinical pathology. Learners demonstrate basic laboratory procedures including: storage, cleaning and the principles of microscopy. Learners will study parasites of common domestic species, prevention, lifecycle, treatment, and impact on animal health. Labs will concentrate on diagnostic parasitology. *Prerequisites: 10-091-172 VET MED TERMINOLOGY and 10-091-174 VET OFFICE PROC. Pre/Corequisites: 10-091-126 COMPANION ANIMAL AND EQUINE DISEASES and 10-091-193 ANIMAL NURSING 1.*

10-091-211 VETERINARY PHARMACOLOGY 1 2 credits

Introduces learners to various drugs and other substances used in veterinary medicine. Learners will analyze drug classification, effects, side effects, uses and client education related to a wide variety of uses in the field of animal medicine. Learners will apply principles of client education, measurement, administration and safe storage of drugs used in veterinary medicine. *Prerequisite: 10-806-197 MICROBIOLOGY.*

10-091-217 DAIRY NUTRITION 2 credits

Analyze the nutritional needs of dairy cattle during each stage of their life. Topics covered include: roles of digestive nutrients, nutritional requirements at various growth stages, relationship between forage quality and nutrition, ration balancing through calculation of feed and dry matter intake. Learners explore various methods of feeding dairy animals, including grazing system principles. Learners evaluate the use of dairy nutrition feed technologies. *Prerequisite: 10-091-101 ORIENTATION TO AGRICULTURE STUDIES or 10-091-204 ORIENTATION TO VETERINARY STUDIES. Condition: Accepted into the Dairy Science, Agri-Business or Veterinary Science Associate Degree program, or with Dean approval.*

10-091-218 BOVINE REPRODUCTION 2 credits

Expands learner's ability to manage a dairy herd with concentration on breed identification, reproduction, genetics including linear appraisal and selection indexes, calving management and record keeping systems. Learners apply artificial insemination concepts through hands-on application. *Prerequisite: 10-091-101 ORIENTATION TO AGRICULTURE STUDIES or 10-091-204 ORIENTATION TO VETERINARY STUDIES. Condition: Accepted into the Dairy Science, Agri-Business or Veterinary Science Associate Degree program, or with Dean approval.*

10-091-212 VETERINARY TECHNICIAN INTERNSHIP 4 credits

This 240 hour internship in a veterinary clinic helps learners develop their skills in a working environment. *Condition: Accepted in the Veterinary Technician Associate Degree or with Dean or Associate Dean approval.*

10-091-206 CLINICAL PATHOLOGY 2 3 credits

Emphasis is placed on hematology and urinalysis. Learners will practice sample collection and perform venipuncture on common domestic species. Labs will consist of learners practicing diagnostic procedures such as CBCs, blood chemistry and urinalysis. *Prerequisite: 10-091-202 VET CLINICAL PATHOLOGY 1.*

- 10-091-207 EQUINE HEALTH MANAGEMENT** 1 credits
Explores routine horse care. Learners will study various topics in equine healthcare such as colic prevention, hoof structure, hoof care, common foot problems, parasites and vaccines. Learners will study methods for recognizing illness and administering first aid and dental care. Basic pasture management, poisonous plants, feeding management and feed evaluation will be covered.
- 10-091-208 ANIMAL NURSING 2** 3 credits
Explores surgical nursing and anesthesia on common domestic species. Learners will gain experience with patient preparation for common surgical procedures, presurgical diagnostics, anesthetic protocols, aseptic technique, and surgical assisting. *Prerequisite: 10-091-193 ANIMAL NURSING 1.*
- 10-091-213 VETERINARY PHARMACOLOGY 2** 2 credits
Builds on the concepts learned in Veterinary Pharmacology 1. Learners will continue to analyze drugs commonly used in veterinary medicine. *Prerequisite: 10-091-211 VETERINARY PHARMACOLOGY 1.*
- 10-091-123 LIVESTOCK DISEASES** 2 credits
Explores infectious and non-infectious disease processes of livestock. Emphasis will be placed on bovine diseases, however certain diseases of sheep, goats, camelids, cervids, and swine may also be covered. Disease etiology, symptoms, transmission, diagnosis, treatment, prevention, and control will be covered. Population dynamics and the financial impact on herds will be evaluated. Proper reporting requirements of federally regulated diseases will be discussed. Zoonotic diseases that are of concern for people working with livestock species will be accentuated. *Condition: Accepted into the Dairy Science AD, or Veterinary Science AD, Veterinary Technician Associate Degree or with Dean approval.*
- 10-091-199 ANIMAL RESEARCH METHODS - AALAS** 2 credits
Applies research mandates, occupational health issues, alternatives, humane standards, housing, exercise requirements, detecting pain and distress. Additionally, learners will explore analgesics, sedatives and anesthetics used in the research setting. Learners will examine supportive care and animal monitoring. This course is offered in an online format. *Condition: Accepted into the Veterinary Science Associate Degree or Veterinary Technician Associate Degree, or with Dean approval.*
- 10-091-209 ANIMAL NURSING 3** 3 credits
Participate in surgical procedures including dog and cat sterilization surgeries. Other surgical procedures may occasionally be performed as needed. Learners will participate as anesthetists, sterile surgical assistants, and non-sterile assistants throughout the course. *Prerequisite: 10-091-208 ANIMAL NURSING 2.*