VETERINARY TECHNOLOGY

The Veterinary Technology Program at Mount Wachusett Community College provides students with the opportunity to earn an Associate of Science Degree in Veterinary Technology. Upon completion of the program, students are prepared to take the Veterinary Technician National Exam (VTNE), the first step towards state licensure or certification. During the course of study, students will develop skills and competencies to prepare for positions in a variety of veterinary science settings.

VETERINARY TECHNOLOGY (VTE) *(SELECTIVE)*

Veterinary technicians (veterinary nurses) perform a wide range of duties on a day-to-day basis. They provide essential nursing care to hospitalized patients by administering medications, placing IV catheters, performing diagnostic imaging and many other advanced skills. By employing observational skills and interpreting body language veterinary technicians are able to recognize subtle changes in patient status allowing the veterinarian to adjust treatment appropriately. Other tasks of the job include performing medical tests in a laboratory environment for use in the treatment and diagnosis of diseases in animals (such as urinalysis and blood counts), cleaning and sterilizing instruments and materials, maintaining equipment and machines, preparing vaccines and serums for prevention of animal diseases, preparing tissue samples, and collecting blood samples. Veterinary technicians are often found assisting a veterinary surgeon during surgery, by running and monitoring anesthesia on the patient or scrubbing in to help the surgeon. MWCC's Veterinary Technology program will help students build their hands-on and critical thinking skills to pursue successful careers as veterinary technicians.

MWCC's Veterinary Technology Program was granted initial accreditation by the American Veterinary Medical Association (AVMA) Committee on Veterinary Education and Activities (CVTEA) effective September 13, 2019. Students who graduate from this program are eligible to take the Veterinary Technician National Exam (VTNE). Upon obtaining a successful passing score on the VTNE, an individual can apply through their states Veterinary Technician Association for Veterinary Technician credentialing.

Sample job titles are as follows: Registered Veterinary Technician (RVT), Licensed Veterinary Technician (LVT), Certified Veterinary Technician (CVT), Veterinary Technician, Veterinary Nurse, Veterinary Laboratory Technician, and specialty technicians.

Year 1		
Fall		**Credits**
ENG 101	College Writing I	3
CHE 107	General Chemistry I	4
MAT 142	Mathematics for Healthcare	3
VTE 210	Veterinary Clinical Nursing Skills I	4
VTE 102	Anatomy and Physiology and Laboratory Procedures of Domestic Animals I	4
Spring		
VTE 211	Veterinary Clinical Nursing Skills II	4
VTE 205	Veterinary Pharmacology	3
VTE 104	Anatomy and Physiology and Laboratory Procedures of Domestic Animals II	6
ENG 102	College Writing II	3
Year 2		
Fall		
VTE 215	Veterinary Technician Internship I	2
VTE 110	Farm Animal Medicine	4
BIO 225	Veterinary Parasitology	4
VTE 222	Medicine and Management of Exotics and Laboratory Animals	3
Social Science Elective [2]		3
Spring		
VTE 216	Veterinary Technician Internship II	2
VTE 225	Surgical Nursing and Dentistry	4
VTE 208	Veterinary Radiology	3
VTE 218	Domestic Animal Behavior	2
Humanities Elective [3]		3
Humanities Elective [3]		3
	Total Credits:	**67**

1 All VTE courses must be completed with a C+ or higher.
2 Social Sciences Electives: Elective Courses by Abbreviation (http://catalog.mwcc.edu/electivecoursesbyabbreviation/).
3 Humanities Electives: Elective Courses by Abbreviation (http://catalog.mwcc.edu/electivecoursesbyabbreviation/).

[4] VTE courses greater than five years in age will not be applicable to the program of study.

Campus

This program is offered on the Gardner campus full time only. Students will be required to complete internships during their third and fourth semesters. Attendance at internship sites is mandatory and will require students to travel.

Application Information

For specific details refer to the selective program application available through MWCC Admissions (https://mwcc.edu/admissions/).

Student Success Tips

Because of an extensive classroom and clinical commitment, students are encouraged to complete some of the general education requirements prior to beginning veterinary technology courses.

Technology is integrated into all aspects of attending college in the 21st century. Students are expected to have proficient computer skills and the ability to access the internet via desktop/laptop computer or tablet. Internet access may be from home or through a public site, such as a local public library, public college or at any MWCC campus.

Special Requirements

Please see Selective Program Requirements for Veterinary Technology (http://catalog.mwcc.edu/admissions/selectiveprogramrequirements/veterinarytechnology/).

Career Options/Earning Potential

For career options, please click here (https://mwcc.lightcastcc.com/programs/veterinary-technology-associate-degree/166957/?region=North%20Central%20MA/Southwest%20NH&radius=).

PROGRAM STUDENT LEARNING OUTCOMES FOR VTE:

Upon graduation from this program, students shall have the ability to:

- Successfully carry out and complete each individual task as described within the *Essential Skills List* developed and owned by the AVMA Committee on Veterinary Technician Education and Activities (CVTEA) List (https://www.avma.org/education/center-for-veterinary-accreditation/committee-veterinary-technician-education-activities/cvtea-accreditation-policies-and-procedures-appendix-h/).
- The list includes, but is not limited to the following skills:
- Effectively and accurately auscultate the heart and lungs of multiple species seen in large and small animal veterinary medicine.
- Accurately compute mathematical calculations as necessary during the treatment and care of patients.
- Demonstrate a thorough understanding of the roles of the veterinary technician in the practice of their choice.
- Recognize the common vaccines used in domestic animals, describe the vaccine reactions seen in domesticated species, and analyze the types of drugs and their mechanisms of action.
- Accurately handle controlled substances in accordance with the local, state, and federal laws.
- Demonstrate understanding of patient care before, during and after a surgical procedure.
- Effectively and accurately communicate with veterinary professionals and clients.
- Within the veterinary setting, evaluate the concept of medical records and record keeping, explain inventory and bookkeeping, and assess veterinary sanitation protocols.
- Correctly operate laboratory analyzers and practice safe and ethical laboratory procedures.
- Describe and demonstrate the procedures used to diagnose parasitic infections in domestic animals.

Technical Standards [1] for VTE:

[1] For general information about technical standards and accommodation, see Technical Standards (http://catalog.mwcc.edu/academicresources/academicandgradingpolicies/technicalstandards/).

Students entering this program must be able to demonstrate the ability to:

- Comprehend textbook material at a college level.
- Communicate and assimilate information either in spoken, printed, signed, or computer voice format.
- Gather, analyze, and draw conclusions from data.
- Stand for a minimum of two hours.
- Walk for a minimum of six hours, not necessarily consecutively.
- Stoop, bend, and twist for a minimum of 30 minutes at a time and be able to repeat this activity at frequent intervals.
- Differentiate colors as assessed by standard color blindness evaluation.
- Differentiate by touch hotness/coldness, wetness/dryness, and hardness/softness.
- Use the small muscle dexterity necessary to do such tasks as gloving, gowning, and operating controls on laboratory instrumentation.
- Respond to spoken words, monitor signals, and instrument alarms.
- Identify behaviors that would endanger a person or animal's life or safety and intervene quickly in a crisis situation with an appropriate solution.
- Remain calm, rational, decisive, and in control at all times, especially during emergency situations.
- Lift a 50-pound animal or assist with a larger animal and transfer the animal from one location to another.
- Exhibit social skills appropriate to professional interactions.
- Maintain cleanliness and personal grooming consistent with close personal contact.
- Function without causing harm to self or animals or others if under the influence of prescription or over-the-counter medications.
- Independently respond to spoken words, monitor signals and instrument alarms
- Independently rely on the sensory skills of sight, touch and hearing in order to maintain environmental safety and awareness

VTE 101. Introduction to Veterinary Technology. 4 Credits.
This course will introduce new Veterinary Technology students to the expectations of learning throughout the program, medical terminology, breed identification of dogs and cats, common regulatory agencies throughout the field, and credentialing of veterinary professionals. Students will explore the inner workings of veterinary hospitals, discover the medical ethics laws for veterinary health care professionals, partake in appropriate communication between veterinary professionals and clients, interpret medical records, schedule appointments and discuss common laws relating to medical malpractice within the veterinary field. Students will also learn about career pathways and job preparedness and compassion fatigue. There will be a weekly mandatory study session that will be scheduled outside of class time. Students must achieve a C+ or better test score average to progress in the program. Prerequisites: Acceptance into the Veterinary Technology program.

VTE 102. Anatomy and Physiology and Laboratory Procedures of Domestic Animals I. 4 Credits.
Participants learn the inner workings of the domesticated animal's body and how organs develop, their functions, and the reason they are present in the body. Students will use preserved animals, teaching mannequins and anatomical models of a variety of species to study both gross and microscopic anatomy of the integumentary, skeletal and muscular systems. A final grade of C+ or better test score average is needed to progress in the program. Prerequisites: MAT 142 (or corequisite); BIO 109, BIO 113 or BIO 118; VTE 210 with a C+ test score average or higher (or corequisite). Fall.

VTE 103. Anatomy and Physiology of Domestic Animals II. 4 Credits.
VTE 103 is a continuation of VTE 102. This course will more comprehensively explore the inner workings of the body. Students will learn about the circulatory, immune, cardiovascular, urinary, respiratory, and reproductive systems. Students must achieve a C+ or higher to progress in the program. Prerequisites: VTE 102 with a C+ or higher. Spring.

VTE 104. Anatomy and Physiology and Laboratory Procedures of Domestic Animals II. 6 Credits.
VTE 104 is a continuation of VTE 102. This course will more comprehensively explore the inner workings of the body. Students will learn about the cardiovascular, immune, urinary, respiratory, digestive, and reproductive systems. Students must achieve a C+ or higher test score average to progress in the program. Prerequisite: VTE 102 with a C+ or higher test score average. Spring.

VTE 110. Farm Animal Medicine. 4 Credits.
This course will discuss breed identification, restraint and handling techniques, husbandry, behavior, anatomy, nutrition, common diseases and medical practices in large animal species. Laboratories will meet off-site at large animal facilities. Students must achieve a C+ or higher test average score to progress in the program. Prerequisites: VTE 211, VTE 103 with a C+ or higher test score average. Fall.

VTE 205. Veterinary Pharmacology. 3 Credits.
Students will explore the principles of pharmacology including drugs commonly used in veterinary medicine; various administration methods; types of drugs; indications and contraindications of drug use; and mechanism of action; as well as drug labeling, dispensing and packaging. Each student will also understand the legalities and ethics of using controlled substances. Medical calculations, prescription notation and proper record keeping will also be reviewed. Student must achieve a C+ or better test average score to progress in the program. Prerequisites: VTE 210 and MAT 142 with a C+ or higher test average score and CHE 107 with a C+ or higher. Spring.

VTE 208. Veterinary Radiology. 3 Credits.
This course will cover general veterinary radiology safety, x-ray generation, digital radiology, positioning and restraint. Ultrasonography, CT and MRI will also be covered. Student must achieve a C+ or better test average score to progress in the program. Prerequisites: VTE 103 and VTE 110 with a C+ or higher test average score. Spring.

VTE 210. Veterinary Clinical Nursing Skills I. 4 Credits.
This course will introduce new Veterinary Technology students to the expectations of learning throughout the program, medical terminology, medical calculations, breed identification of companion animals, common regulatory agencies throughout the field, and credentialing of veterinary professionals. Students will explore the inner workings of veterinary hospitals, discover the medical ethics laws for veterinary health care professionals, partake in appropriate communication between veterinary professionals and clients, interpret medical records, introduced to a variety of veterinary professional software and discuss common laws relating to medical malpractice within the veterinary field. This course will also provide the student with the knowledge and the hands-on skills essential for the day-to-day veterinary technician role. This will include topics such as performing thorough physical exams; general health programs; restraint and handling; administering medications topically and orally; bandaging. Students must achieve a C+ or better test average score to progress in the program. Fall.

VTE 211. Veterinary Clinical Nursing Skills II. 4 Credits.
This course is a continuation of VTE 210 Veterinary Clinical Skills I. Instructor will provide the student with knowledge and the hands on skills essential for the day-to-day veterinary technician role. This will include topics such as administering medications intramuscularly, subcutaneously, and intravenously; venipuncture intravenous catheter placement; urinary catheter placement; fluid therapy; emergency procedures; nursing care. Students must achieve a C+ or higher test average score to progress in the program. Prerequisite: VTE 210, VTE 102, with a C+ or higher test score average; corequisite VTE 103. Spring.

VTE 215. Veterinary Technician Internship I. 2 Credits.
Students are required to participate in an off-site externship for 120 total hours at a facility of their choosing. Each facility must be pre-approved by the Veterinary Technology Program Director prior to the student starting their externship. Students may select an externship in any type of facility they please (i.e. large animal, emergency medicine, specialty medicine, marine life, research and exotics), but must be under direct supervision of a certified veterinary technician (CVT) or a DVM, unless otherwise decided by the Program Director. Each rotation will require a journal submitted at the end of the rotation while at the externship. Prior to completing the course, students are required to present an interesting case study in which they were involved during their externships. Students must achieve a C+ or higher to progress in the program. Prerequisites: VTE 211, VTE 205, VTE 103 with a C+ or higher. Fall.

VTE 216. Veterinary Technician Internship II. 2 Credits.
Students are required to participate in an off-site externship for 120 total hours at a facility of their choosing. Each facility must be pre-approved by the Veterinary Technology Program Director prior to the student starting their externship. Students may select an externship in any type of facility they please (i.e. large animal, emergency medicine, specialty medicine, marine life, research and exotics), but must be under direct supervision of a certified veterinary technician (CVT) or a DVM, unless otherwise decided by the Program Director. Each rotation will require a journal submitted at the end of the rotation while at the externship. Prior to completing the course, students are required to present an interesting case study in which they were involved during their externship. Offered during Spring and Summer semesters. Students must achieve a C+ or higher to progress in the course. Prerequisites: VTE 215 with a C+ or higher. Spring.

VTE 218. Domestic Animal Behavior. 2 Credits.
This course will explore the different behaviors displayed by canines and felines. Body language, communication, social structure and life stage behavior will be discussed in detail. Strategies for preventing and correcting unwanted behaviors will also be discussed. Students must achieve a C+ or better test average score in order to progress in the program. Prerequisites: VTE 210, VTE 102 all with a C+ or higher test score average. Spring.

VTE 220. Veterinary Clinical Laboratory Procedures. 4 Credits.
The purpose of this course is to provide students with the knowledge of how to properly collect and handle laboratory specimens, proper storage of each specimen, and general laboratory procedures. Each student will learn the skills used by most veterinary practices in the fields of blood chemistries, hematology, cytology and urine. Students must achieve a C+ or higher average test score to progress in the program. Prerequisites: VTE 211, VTE 103 with a C+ or higher test score average. Spring.

VTE 222. Medicine and Management of Exotics and Laboratory Animals. 3 Credits.
This course will provide the student with the information needed to safely handle small animals and exotics. The course will also cover the local, federal and state mandated laws and regulations regarding the care and use of laboratory animals. Students will explore proper husbandry, restraint and technical skills such as drawing blood and injecting medications into small animals and exotics which include rodents, rabbits, ferrets and other small mammals, birds, fish, and reptiles. During the time small animals are kept on campus, students will need to perform husbandry duties for those animals, including weekends. Student must achieve a C+ or higher test score average to progress in the program. Prerequisites: VTE 103, VTE 211, VTE 205, with a C+ or higher test score average. Fall.

VTE 225. Surgical Nursing and Dentistry. 4 Credits.
Students will explore the knowledge and experience that are essential in performing safe surgical procedures in veterinary practice. Students will learn how to anesthetize small animals; properly and effectively monitor patients under anesthesia; and use aseptic techniques required for surgical procedures. Students will be able to identify and explain proper use of surgical equipment and surgical instruments. Students are required to understand the methods and safety precautions for patients and veterinary professionals before, during, and after surgical procedures. Students will also develop the skills for performing thorough dental prophylaxis, diagnostic dental radiographs, and the ability to identify dental disease. Student must achieve a C+ or higher test average score to progress in the program. Prerequisites: VTE 103, VTE 205, and VTE 211 with a C+ or higher test score average. Spring.