

Program Planning Guide

Veterinary Medical Technology, Associate in Applied Science Degree (A45780)

The Veterinary Medical Technology curriculum prepares individuals to assist veterinarians in preparing animals, equipment, and medications for examination and surgery; collecting specimens; performing laboratory, radiographic, anesthetic, and dental procedures; assisting in surgery; and providing proper husbandry of animals and their environment.

Course work includes instruction in veterinary anatomy, nutrition, parasitology, pathology, physiology, radiology, terminology, zoology, office practices, laboratory techniques, dentistry, and small and large animal clinical practices. Students also take courses in English, humanities, psychology, mathematics, chemistry, and computer technology.

The Central Carolina Community College Veterinary Medical Technology Program is accredited by the American Veterinary Medical Association's Committee on Veterinary Technician Education and Activities (CVTEA). Graduates may be eligible to take state and national examinations administered by the North Carolina Veterinary Medical Board. Graduates may be employed in veterinary clinics; diagnostic, research, or pharmaceutical laboratories; zoos; academic institutions; or other areas associated with animal care.

See the College Catalog and the Health Science Programs Admissions packet for details regarding: Limited Enrollment Curriculum; Entrance Standards; Required Admissions Criteria and Requirements for Acceptance.

(<http://www.cccc.edu/curriculum/majors/VMTRatingSheet.pdf>)

Program Length: 5 semesters

Career Pathway Options: Associate in Applied Science in Veterinary Medical Technology

Program Site(s): Lee Main Campus: Day Program

Suggested Course Schedule:	Hours				Grade	Semester	Notes
	Class	Lab	Clinical	Credit			
1st Semester (Fall)							
ACA 115	Success and Study Skills	0	2	0	1		Online or Seated
MAT 110	Mathematical Measurement	2	2	0	3		Seated
VET 110	Animal Breeds and Husbandry	2	2	0	3		Seated
VET 114	Intro to Veterinary Med Tech.	1	0	0	1		Online or Seated
VET 120	Veterinary Anatomy & Physiology	3	3	0	4		Seated
VET 121	Veterinary Medical Terminology	3	0	0	3		Online or Seated
		11	9	0	15		
2nd Semester (Spring)							
CHM 130	General Organic & Biochemistry	3	0	0	3		
CHM 130A	General Organic & Biochemistry Lab	0	2	0	1		
ENG 111	Writing and Inquiry	3	0	0	3		
VET 123	Veterinary Parasitology	2	3	0	3		
VET 125	Veterinary Diseases I	2	0	0	2		
VET 137	Veterinary Office Practices	1	2	0	2		
See HSAP*	Humanities/Fine Arts Elective	3	0	0	3		
		14	7	0	17		
3rd Semester (Summer)							
VET 131	Veterinary Lab Techniques I	2	3	0	3		Seated
VET 133	Veterinary Clinical Practices I	2	3	0	3		Seated
See HSAP*	Social/Behavioral Science Elective	3	0	0	3		Online or Seated
		7	6	0	9		

*HSAP: Health Sciences Admissions Packet

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4th Semester (Fall)

WBL 112A	Work-Based Learning I	0	10	0	1			Seated
ENG 114	Professional Research & Reporting	3	0	0	3			Online or Seated
VET 126	Veterinary Diseases II	1	3	0	2			Seated
VET 211	Veterinary Lab Techniques II	2	3	0	3			Seated
VET 213	Veterinary Clinical Practices II	1	9	0	4			Seated
VET 215	Veterinary Pharmacology	3	0	0	3			Seated
WBL 112A	Work-Based Learning I	0	10	0	1			Seated
		10	25	0	16			

5th Semester (Spring)

WBL 112B	Work-Based Learning I	0	10	0	1			Seated
VET 212	Veterinary Lab Techniques III	2	3	0	3			Seated
VET 214	Veterinary Clinical Practices III	1	9	0	4			Seated
VET 217	Large Animal Clinical Practices	2	3	0	3			Seated
VET 237	Animal Nutrition	3	0	0	3			Seated

Total Semester Hours Credit: 71

Course Descriptions:

ACA 115 Success and Study Skills 0-2-0-1

This course provides an orientation to the campus resources and academic skills necessary to achieve educational objectives. Emphasis is placed on an exploration of facilities and services, study skills, library skills, self-assessment, wellness, goal-setting, and critical thinking. Upon completion, students should be able to manage their learning experiences to successfully meet educational goals.

is placed on the writing process including audience analysis, topic selection, thesis support and development, editing, and revision. Upon completion, students should be able to produce unified, coherent, well-developed essays using standard written English. This course has been approved for transfer under the CAA and ICAA as a general education course.

CHM 130 General, Organic and Biochemistry 3-0-3

Local Corequisite: CHM 130A

This course provides a survey of basic facts and principles of general, organic, and biochemistry. Topics include measurement, molecular structure, nuclear chemistry, solutions, acid-base chemistry, gas laws, and the structure, properties, and reactions of major organic and biological groups. Upon completion, students should be able to demonstrate an understanding of fundamental chemical concepts. This course has been approved for transfer under the CAA and ICAA a premajor and/or elective course requirement.

ENG 114 Professional Research and Reporting 3-0-3

Prerequisite: ENG 111

This course, the second in a series of two, is designed to teach professional communication skills. Emphasis is placed on research, listening, critical reading and thinking, analysis, interpretation, and design used in oral and written presentations. Upon completion, students should be able to work individually and collaboratively to produce well-designed business and professional written and oral presentations. The computer is used as a writing and design tool for this course. This course has been approved for transfer under the CAA and ICAA as a general education course in English Composition.

CHM 130A General, Organic and Biochemistry Lab 0-2-1

Corequisite: CHM 130

This course is a laboratory for CHM 130. Emphasis is placed on laboratory experiences that enhance materials presented in CHM 130. Upon completion, students should be able to utilize basic laboratory procedures and apply them to chemical principles presented in CHM 130. Also included are EMR, spectrophotometry, extraction, safety, and feed analysis. This course has been approved for transfer under the CAA and ICAA a premajor and/or elective course requirement.

MAT 110 Mathematical Measurement 2-2-3

Prerequisite: Take one set: DMA-010, DMA-020, and DMA-030; MAT 060 and MAT 070, MAT 060 and MAT 080, MAT 060 and MAT 090, MAT 095, MAT 120, MAT 121, MAT 161, MAT 171, MAT 175 or appropriate placement test scores

This course provides an activity-based approach to utilizing, interpreting, and communicating data in a variety of measurement systems. Topics include accuracy, precision, conversion, and estimation within metric, apothecary, and avoirdupois systems; ratio and proportion; measures of central tendency and dispersion; and charting of data. Upon completion, students should be able to apply proper techniques to gathering, recording, manipulating, analyzing, and communicating data.

ENG 111 Writing and Inquiry 3-0-3

Prerequisites: Take one set: DRE-098 or appropriate placement test scores.

This course is the required first course in a series of two designed to develop the ability to produce clear expository prose. Emphasis

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<p>VET 110 Animal Breeds and Husbandry 2-2-3 <i>Local Prerequisite:</i> Enrollment in Veterinary Medical Technology program This course provides a study of the individual breed characteristics and management techniques of the canine, feline, equine, bovine, porcine, ovine, caprine, and laboratory animals. Topics include physiological data, animal health management, and basic care and handling of animals. Upon completion, students should be able to identify breeds of domestic and laboratory animals, list physiological data, and outline basic care, handling, and management techniques.</p>	<p>VET 125 Veterinary Diseases 12-0-2 <i>Local Prerequisite:</i> VET 120 This course introduces basic immunology, fundamentals of disease processes including inflammation, and common infectious diseases of animals and their prevention through immunization. Topics include fundamental disease processes, principles of medical therapy, immunologic processes, infections and zoonotic diseases of domestic animals, and prevention of disease. Upon completion, students should be able to describe basic disease and immunological processes, recognize infections and zoonotic diseases, and discuss prevention strategies.</p>
<p>VET 114 Introduction to Veterinary Medical Technology 1-0-1 <i>Local Prerequisite:</i> Enrollment in Veterinary Medical Technology program This course introduces the standard operating procedures and responsibilities of veterinary medical technology departments, common zoonotic diseases, safety and ethical issues, and USDA/DEA/OSHA regulations/compliance. Emphasis is placed on standard operating procedures, zoonotic diseases, safety and ethical issues, and the importance of USDA/DEA/OSHA regulations and compliance. Upon completion, students should be able to perform duties assigned in veterinary medical technology, recognize potential zoonotic diseases, and establish safety protocols/regulatory compliance.</p>	<p>VET 126 Veterinary Diseases II 1-3-2 <i>Prerequisite:</i> VET 125 This course includes the study of basic disease processes, fundamentals of pathology, and other selected topics of veterinary medicine. Topics include histopathology, pathologic changes associated with common diseases of animals, necropsy procedures, specimen handling. Upon completion, students should be able to describe basic pathologic changes associated with disease, recognize histopathologic changes, and properly perform collection and submission of necropsy specimens.</p>
<p>VET 120 Veterinary Anatomy and Physiology 3-3-4 <i>Local Prerequisite:</i> Enrollment in the Veterinary Medical Technology program, Completion of one of the following: high school biology course, BIO 090, BIO 094, BIO 110, BIO 111 or by permission of the instructor This course covers the structure and function of the animal body with emphasis on the similarities and differences among domestic animals. Emphasis is placed on the structure and function of the major physiological systems of domestic, laboratory, and zoo animals. Upon completion, students should be able to identify relevant anatomical structure and describe basic physiological processes for the major body systems.</p>	<p>VET 131 Veterinary Laboratory Techniques I 2-3-3 <i>Prerequisite:</i> VET 123 <i>Corequisite:</i> VET 133 This course includes the fundamental study of hematology, hemostasis, and urinalysis. Emphasis is placed on basic hematology and urinalysis techniques, manual skill development, instrumentation, quality control, and applications to veterinary science. Upon completion, students should be able to perform manual and automated CBCs, hemostatic assays, and complete urinalyses and maintain laboratory equipment and quality control.</p>
<p>VET 121 Veterinary Medical Terminology 3-0-3 <i>Local Corequisite:</i> Enrollment in Veterinary Medical Technology program This course covers the basic medical terminology required for veterinary technicians. Topics include the pronunciation, spelling, and definition of word parts and vocabulary terms unique to the anatomy, clinical pathology, and treatment of animals. Upon completion, students should be able to demonstrate knowledge and understanding of basic medical terms as they relate to veterinary medicine.</p>	<p>VET 133 Veterinary Clinical Practice I 2-3-3 <i>Local Prerequisite:</i> VET 123 <i>Local Corequisite:</i> VET 131 <i>Corequisite:</i> VET 120 This course introduces basic practices and techniques of the veterinary clinic and biomedical research fields for dogs, cats, and laboratory animals. Topics include physical exam, husbandry, housing, sanitation, restraint and handling, administration of medications, anesthesia and euthanasia techniques, grooming, and dentistry. Upon completion, students should be able to properly restrain, medicate, examine, groom, and maintain each of the species studied.</p>
<p>VET 123 Veterinary Parasitology 2-3-3 <i>Local Prerequisite:</i> VET 120 This course covers the common internal and external parasites of companion animals, livestock, selected zoo animals, and wild animals. Emphasis is placed on laboratory diagnosis of the most common forms of the parasite through fecal, urine, skin, and blood exams. Upon completion, students should be able to identify common parasites and discuss life-cycles, treatment and prevention strategies, and public health aspects of veterinary parasitology.</p>	<p>VET 137 Veterinary Office Practices 1-2-2 <i>Local Prerequisites:</i> VET 131, VET 133, Enrollment in Veterinary Medical Technology program This course is designed to teach basic administrative techniques, client communication skills, and regulations pertaining to veterinary medicine. Topics include record keeping, telephone techniques, professional liability, office procedures, state and national regulatory laws, human relations, and animal welfare. Upon completion, students should be able to demonstrate effective communication techniques, office procedures, and knowledge of regulatory laws and issues relating to animal welfare.</p>

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<p>VET 211 Veterinary Laboratory Techniques II 2-3-3 <i>Prerequisite: VET 131</i> <i>Corequisite: VET 213</i> This course covers advanced hematology, serology, immunology, and clinical chemistry. Topics include advanced hematologic, serologic, and immunologic test procedures; manual and automated clinical chemistry procedures; laboratory safety; and quality control. Upon completion, students should be able to collect, prepare, and analyze serum and plasma samples and outline quality control and safety procedures.</p>	<p>VET 217 Large Animal Clinical Practice 2-3-3 <i>Prerequisite: VET 120</i> <i>Local Prerequisite: VET 125</i> <i>Corequisite: VET 213</i> <i>Local Corequisite: VET 214</i> This course covers topics relevant to the medical and surgical techniques for the common domestic large animal species. Topics include physical exam, restraint, sample collection, bandaging, emergency treatment, surgical and obstetrical procedures and instruments, herd health, and lameness topics. Upon completion, students should be able to safely perform restraint, examination, and sample collection; assist surgical, obstetrical, and emergency procedures; and discuss herd health.</p>
<p>VET 212 Veterinary Laboratory Techniques III 2-3-3 <i>Prerequisite: VET 211</i> <i>Corequisite: VET 214</i> This course introduces the basic principles of microbiology, histology, and cytology. Emphasis is placed on collection of microbiological samples for culture and sensitivity and collection and preparation of samples for histological and cytological examination. Upon completion, students should be able to perform microbiological culture and sensitivity and evaluate cytology and histology specimens.</p>	<p>VET 237 Animal Nutrition 3-0-3 <i>Local Prerequisites: CHM 130 and CHM 130A; enrollment in Veterinary Medical Technology program</i> This course covers the principles of nutrition and their application to feeding practices of domestic, farm, and companion animals. Topics include basic nutrients and nutritional needs of individual species, proximate analysis, interpretation of food and feed labels, types of animal foods, and ration formulation. Upon completion, students should be able to select appropriate diets for animals in various stages of health and disease, analyze nutrition labels, and identify foods.</p>
<p>VET 213 Veterinary Clinical Practice II 1-9-4 <i>Prerequisite: VET 133</i> <i>Local Corequisite: VET 211</i> This course covers basic radiography, anesthesia techniques, dentistry, sample collection and handling, surgical assistance and instrumentation, sterile techniques, and patient record keeping. Topics include basic radiography, injectable and gas anesthesia, dentistry, instrument identification and care, sterile surgical technique, specimen collection and processing, and maintenance of patient records. Upon completion, students should be able to take and process radiographs, administer and monitor anesthesia, assist in surgical procedures, collect specimens, and maintain surgical records.</p>	<p>WBL 112A Work-Based Learning I 0-0-10-1 This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.</p>
<p>VET 214 Veterinary Clinical Practice III 1-9-4 <i>Prerequisite: VET 213</i> <i>Local Corequisite: VET 212</i> This course covers advanced anesthetic techniques, special radiographic techniques, advanced dentistry, sample collection and processing, bandaging, and emergency and critical care procedures. Topics include induction and maintenance of anesthesia, radiographic contrast studies, advanced dentistry, external coaptation, intensive care procedures, and advanced sample collection techniques. Upon completion, students should be able to demonstrate proficiency in sample collection, radiology, anesthesia, critical care and emergency procedures, and dentistry.</p>	<p>WBL 112B Work-Based Learning I 0-0-10-1 This course provides a work-based learning experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.</p>
<p>VET 215 Veterinary Pharmacology 3-0-3 <i>Prerequisites: CHM 130 and CHM 130A or CHM 151</i> <i>Corequisite: VET 213</i> This course introduces drugs and other substances utilized in veterinary medicine. Emphasis is placed on drug classification and methods of action, administration, effects and side effects, storing and handling of drugs, and dosage calculations. Upon completion, students should be able to properly calculate and administer medications, recognize adverse reactions, and maintain pharmaceutical inventory and administration records.</p>	