

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

Suggested Course Schedule:

		Hours				Notes:
		Class	Lab	Clinical	Credit	
1st Semester (Fall)						
ACA 122	College Transfer Success	0	2	0	1	
MAT 110	Math Measurement & Literacy	2	2	0	3	
VET 110	Animal Breeds & Husbandry	2	2	0	3	
VET 114	Intro to Veterinary Med Tech	1	0	0	1	
VET 120	Veterinary Anatomy & Physiology	3	3	0	4	
VET 121	Veterinary Medical Terminology	3	0	0	3	
					15	
2nd Semester (Spring)						
CHM 130	General, Organic & Biochemistry	3	0	0	3	
CHM 130A	Gen, 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	
					17	
3rd Semester (Summer)						
VET 131	Veterinary Lab Techniques I	2	3	0	3	
VET 133	Veterinary Clinical Practices I	2	3	0	3	
*See HSAP	Social/Behavioral Science Elective	3	0	0	3	
					9	
4th Semester (Fall)						
Communications, take 3 credits from:					3	
ENG 112	Writing/Research in the Disc	3	0	0		
ENG 114	Prof Research & Reporting	3	0	0		
COM 110	Introduction to Communication	3	0	0		
COM 120	Intro Interpersonal Com	3	0	0		
COM 231	Public Speaking	3	0	0		

Veterinary Medical Technology, AAS (A45780)

VET 126	Veterinary Diseases II	1	3	0	2	_____
VET 211	Veterinary Lab Techniques II	2	3	0	3	_____
VET 213	Veterinary Clinical Practices II	1	9	0	4	_____
VET 215	Veterinary Pharmacology	3	0	0	3	_____
WBL 112AB	Work-based Learning I	0	10	0	1	_____
					16	

5th Semester (Spring)

VET 212	Veterinary Lab Techniques III	2	3	0	3	_____
VET 214	Veterinary Clinical Practices III	1	9	0	4	_____
VET 217	Large Animal Clinical Practices	2	3	0	3	_____
VET 237	Animal Nutrition	3	0	0	3	_____
WBL 112BB	Work-based Learning II	0	10	0	1	_____
					14	

**HSAP, Health Sciences Admission Packet*

Total Semester Hours Credit Required for Graduation: 71

Veterinary Medical Technology, AAS (A45780)

Course Descriptions

~ 3 ~

ACA 122 College Transfer Success 0-2-1

This course provides information and strategies necessary to develop clear academic and professional goals beyond the community college experience. Topics include the CAA, college policies and culture, career exploration, gathering information on senior institutions, strategic planning, critical thinking, and communication skills for a successful academic transition. Upon completion, students should be able to develop an academic plan to transition successfully to senior institutions. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

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.

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.

COM 110 Introduction to Communication 3-0-3

This course provides an overview of the basic concepts of communication and the skills necessary to communicate in various contexts. Emphasis is placed on communication theories and techniques used in interpersonal group, public, intercultural, and mass communication situations. Upon completion, students should be able to explain and illustrate the forms and purposes of human communication in a variety of contexts. This course has been approved for transfer under the CAA and ICAA as a general education course in Communications.

COM 120 Intro Interpersonal Com 3-0-0-3

This course introduces the practices and principles of interpersonal communication in both dyadic and group settings. Emphasis is placed on the communication process, perception, listening, self-disclosure, speech apprehension, ethics, nonverbal communication, conflict, power, and dysfunctional communication relationships. Upon completion, students should be able to demonstrate interpersonal communication skills, apply basic principles of group discussion, and manage conflict in interpersonal communication situations. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

COM 231 Public Speaking 3-0-0-3

This course provides instruction and experience in preparation and delivery of speeches within a public setting and group discussion. Emphasis is placed on research, preparation, delivery, and evaluation of informative, persuasive, and special occasion public speaking. Upon completion, students should be able to prepare and deliver well-organized speeches and participate in group discussion with appropriate audiovisual support. This course has been approved for transfer under the CAA and ICAA as a general education course in English Composition.

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 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.

ENG 112 Writing/Research in the Disciplines 3-0-0-3

Prerequisite: ENG 111

This course, the second in a series of two, introduces research techniques, documentation styles, and writing strategies. Emphasis is placed on analyzing information and ideas and incorporating research findings into documented writing and research projects. Upon completion, students should be able to evaluate and synthesize information from primary and secondary sources using documentation appropriate to various disciplines. This course has been approved for transfer under the CAA and ICAA as a universal general education transfer component (UGETC) course in English Composition.

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.

MAT 110 Mathematical Measurement 2-2-3

Local RISE corequisites: Take one group: 1) MAT 010; 2) MAT 003; 3) DAM 010, DMA 020, DMA 030; 4) MAT 060; 5) DMA 025

This course provides an activity-based approach that develops measurement skills and mathematical literacy using technology to solve problems for non-math intensive programs. Topics include unit conversions and estimation within a variety of measurement systems; ratio and proportion; basic geometric concepts; financial literacy; and statistics including measures of central tendency, dispersion, and charting of data. Upon completion, students should be able to demonstrate the use of mathematics and

Veterinary Medical Technology, AAS (A45780)

Course Descriptions

~ 4 ~

technology to solve practical problems, and to analyze and communicate results.

VET 110 Animal Breeds and Husbandry 2-2-3

Local Prerequisite: 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.

VET 114 Introduction to Veterinary Medical Technology 1-0-1

Local Prerequisite: 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.

VET 120 Veterinary Anatomy and Physiology 3-3-4

Local Prerequisite: 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.

VET 121 Veterinary Medical Terminology 3-0-3

Local Corequisite: 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.

VET 123 Veterinary Parasitology 2-3-3

Local Prerequisite: 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.

VET 125 Veterinary Diseases I 2-0-2

Local Prerequisite: 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.

VET 126 Veterinary Diseases II 1-3-2

Prerequisite: 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.

VET 131 Veterinary Laboratory Techniques I 2-3-3

Prerequisite: VET 123

Corequisite: 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.

VET 133 Veterinary Clinical Practice I 2-3-3

Local Prerequisite: VET 123

Local Corequisite: VET 131

Corequisite: 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.

VET 137 Veterinary Office Practices 1-2-2

Local Prerequisites: 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

Veterinary Medical Technology, AAS (A45780)

Course Descriptions

~ 5 ~

effective communication techniques, office procedures, and knowledge of regulatory laws and issues relating to animal welfare.

students should be able to properly calculate and administer medications, recognize adverse reactions, and maintain pharmaceutical inventory and administration records.

VET 211 Veterinary Laboratory Techniques II 2-3-3

Prerequisite: VET 131

Corequisite: VET 213

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.

VET 217 Large Animal Clinical Practice 2-3-3

Prerequisite: VET 120

Local Prerequisite: VET 125

Corequisite: VET 213

Local Corequisite: VET 214

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.

VET 212 Veterinary Laboratory Techniques III 2-3-3

Prerequisite: VET 211

Corequisite: VET 214

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.

VET 237 Animal Nutrition 3-0-3

Local Prerequisites: CHM 130 and CHM 130A; enrollment in *Veterinary Medical Technology program*

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.

VET 213 Veterinary Clinical Practice II 1-9-4

Prerequisite: VET 133

Local Corequisite: VET 211

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.

WBL 112AB 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.

VET 214 Veterinary Clinical Practice III 1-9-4

Prerequisite: VET 213

Local Corequisite: VET 212

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.

WBL 112BB 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.

VET 215 Veterinary Pharmacology 3-0-3

Prerequisites: CHM 130 and CHM 130A or CHM 151

Corequisite: VET 213

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,