CENTRAL CAROLINA COMMUNITY COLLEGE

Health Sciences

Program Planning Guide

Veterinary Medical Technology Associate in Applied Science Degree (A45780)

Program Length: 5 Semesters
Program Sites: Lee Main Campus, seated only

The Veterinary Medical Technology program teaches students how to work alongside veterinarians to care for animals and support medical procedures. Students learn how to prepare animals for exams, surgeries, and anesthesia, as well as how to safely handle and maintain veterinary equipment. The program also covers how to calculate and explain medications, collect lab samples, take X-rays, monitor anesthesia, and perform dental cleanings. In addition, students gain experience assisting during surgery and learning proper techniques for caring for animals and maintaining a clean, healthy environment.

The Veterinary Medical Technology program is accredited by the 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.

Limited Enrollment Application Overview:

The Veterinary Medical Technology (VMT) program is a limited-enrollment program, which means that there are a limited number of seats in this program each year. Students must meet all requirements listed below to enter the VMT program. While they are completing these requirements, pre-VMT Students will be enrolled in the **Pre-Vet Med program (A55280VT)**. Acceptance will be reviewed from November 1 to May 15, and students will be notified of acceptance through email by May 15 each year. Provisional acceptance will be reviewed from May 15 to July 31, and students will be notified of acceptance through email by August 1 each year.

VMT Admission Requirements:

- ☐ Complete 20 credit hours of Pre-VMT general education courses (see page 2).
- ☐ Complete chemistry/biology classes with a B or better.
- ☐ Complete all other general education courses with a C or better.
- ☐ Have a minimum 2.5 GPA based on 20 credit hours of VMT general education courses.
- ☐ Submit documentation of completed rabies vaccination series.
- ☐ Submit documentation of 40 hours of observation at a local veterinary practice shadowing an RVT or DVM.
- ☐ Attend a mandatory, in-person program orientation before beginning the program. The date will be provided in the admission acceptance letter.

Provisional Acceptance:

Provisional acceptance will be offered to a student if there are seats available after all fully accepted students have confirmed their acceptance by May 31 each year, ***and***:

- ☐ The student has a grade of C in chemistry/biology.
- ☐ All remaining general education coursework will be completed by the end of the summer term.
  - ☐ Can have up to two missing general education classes, excluding BIO/CHM.
- ☐ Documentation of completed vaccination series is provided to the department chair by July 31.
- ☐ No documentation of observation hours

Pre-VMT General Education Requirements & Suggested Course Schedule:

Course Schedule		Class	Lab	Clinical	Credits	Notes:
1st Semester (fall)						
ACA 122	Transfer & Career Success	0	2	0	1	Seated or online
MAT 110	Math Measurement & Literacy	2	2	0	3	Seated or online
CHM 130	General, Organic & Biochemistry	3	0	0	3	Seated
CHM 130A	Gen. Organic & Biochemistry Lab	0	2	0	1	Seated
ENG 111	Writing & Inquiry	3	0	0	3	Seated or online
	Total Semester Hours	**8**	**6**	**0**	**11**	
2nd Semester (spring)						
Elective	Communications	3	0	0	3	Seated or online
Elective	Humanities/Fine Arts	3	0	0	3	Seated or online
Elective	Social/Behavioral Science	3	0	0	3	Seated or online
	Total Semester Hours	**9**	**0**	**0**	**9**	

Communication Elective Options: Select One: ENG 112, ENG 114, ENG 115, ENG 116, **COM 110***, COM 120, COM 231

Humanities/Fine Arts Elective Options: Select One: ART 111, ART 114, ART 115, DRA 111, ENG 125, ENG 231, ENG 241, ENG 242, HUM 110, HUM 115, HUM 122, HUM 150, HUM 160, MUS 110, MUS 112, **PHI 240***, REL 110, REL 211, REL 212

Social/Behavioral Science Elective Options: Select One: ANT 210, ANT 220, ECO 151, ECO 251, ECO 252, HIS 111, HIS 112, HIS 131, HIS 132, HIS 222, HIS 223, HIS 226, HIS 236, POL 120, **PSY 150***, PSY 237, PSY 241, PSY 246, PSY 281, SOC 210, SOC 231, SOC 220, SOC 225, SOC 232, SOC 240

Approved Chemistry Substitutions: Can substitute CHM 130, CHM 151, or BIO 180 for CHM 130/130A

Approved Mathematics Substitutions: Can substitute any higher-level math class

*Recommended for VMT students

Upon acceptance into the Veterinary Medical Technology program, students will take the following courses:

Course Schedule		Class	Lab	Clinical	Credits	Notes:
1st Semester (fall)						
VET 110	Animal Breeds & Husbandry	2	2	0	3	Seated
VET 114	Intro to Veterinary Med Tech	1	0	0	1	Online
VET 120	Veterinary Anatomy & Physiology	3	3	0	4	Seated
VET 121	Veterinary Medical Terminology	3	0	0	3	Seated
	Total Semester Hours	**9**	**5**	**0**	**11**	
2nd Semester (spring)						
VET 123	Veterinary Parasitology	2	3	0	3	Seated
VET 125	Veterinary Diseases I	2	0	0	2	Seated
VET 137	Veterinary Office Practices	1	2	0	2	Online
	Total Semester Hours	**5**	**5**	**0**	**7**	
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
	Total Semester Hours	**4**	**6**	**0**	**6**	
4th Semester (fall)						
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 112AB*	Work-Based Learning I - A	0	0	10	1	In-person work experience
	Total Semester Hours	**7**	**15**	**10**	**13**	

5th Semester (spring)						
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	Online
WBL 112BB*	Work-Based Learning I - B	0	0	10	1	In-person work experience
	Total Semester Hours	**8**	**15**	**10**	**14**	
*The full WBL requirement may be completed during a 6th semester versus splitting it over the 4th & 5th semesters.						
Total General Education Semester Hours Credit: 20						
Total Program Semester Hours Credit: 51						
Total Semester Hours Credit Required for Graduation: 71						

Course Descriptions

ACA 122 Transfer & Career Success
This course introduces students to career and transfer opportunities while building skills for academic success, career exploration, and transfer preparation, ensuring readiness for success in community college and beyond. Topics include transfer agreements with public and independent institutions, programs and processes that facilitate transfer, and transfer tools and resources; career topics include career exploration and information and skills such as resume writing, portfolio development, and professional communication. Upon completion, students will be able to identify the community college program that matches their transfer and career goals, navigate transfer policies and processes, use Transfer Guides, develop an academic plan for future success, and identify professional application materials. This course has been approved for transfer under the CAA/ICAA as a premajor and/or elective course requirement.

CHM 130 Gen, Org, & Biochemistry
Requisites: Take CHM-130A - Must be taken either prior to or at the same time as this course.
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, student should be able to demonstrate an understanding of fundamental chemical concepts. This course has been approved for transfer under the CAA/ICAA as a premajor and/or elective course requirement.

CHM 130A Gen, Org, & Biochemistry
Requisites: Take CHM-130 - Must be taken either prior to or at the same time as this course.
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. This course has been approved for transfer under the CAA/ICAA as a premajor and/or elective course requirement.

COM 110 Introduction to Communication
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 as a general education course in Communication.

ENG 111 Writing and Inquiry
Requisites: Take ENG-045 - Must be taken either prior to or at the same time as this course.
This course is designed to develop the ability to produce clear writing in a variety of genres and formats using a recursive process. Emphasis includes inquiry, analysis, effective use of rhetorical strategies, thesis development, audience awareness, 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/ICAA as a general education course in English Composition.

MAT 110 Math Measurement & Literacy
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 technology to solve practical problems, and to analyze and communicate results.

PHI 240 Introduction to Ethics
Requisites: Take ENG-111 - Must be completed prior to taking this course.
This course introduces theories about the nature and foundations of moral judgments and applications to contemporary moral issues. Emphasis is placed on moral theories such as consequentialism, deontology, and virtue ethics. Upon completion, students should be able to apply various ethical theories to moral issues such as abortion, capital punishment, poverty, war, terrorism, the treatment of animals, and issues arising from new technologies. This course has been approved for transfer under the CAA/ICAA as a general education course in Humanities/Fine Arts.

PSY 150 General Psychology
This course provides an overview of the scientific study of human behavior. Topics include history, methodology, biopsychology, sensation, perception, learning, motivation, cognition, abnormal behavior, personality theory, social psychology, and other relevant topics. Upon completion, students should be able to demonstrate a basic knowledge of the science of psychology. This course has been approved for transfer under the CAA/ICAA as a general education course in Social/Behavioral Sciences.

VET 110 Animal Breeds and Husbandry
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 Intro to Veterinary Medical Technology
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
Requisites: Completion of one of the following high school biology course,BIO-094 or BIO-110, or permission of the instructor - Must be completed prior to taking this course.
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
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
Requisites: Take VET-120 - Must be completed prior to taking this course.
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
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
Requisites: Take VET-125 - Must be completed prior to taking this course.
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
Requisites: Take VET-123 - Must be completed prior to taking this course. Take VET-133 - Must be taken either prior to or at the same time as this course.
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
Requisites: Take VET-120 - Must be taken either prior to or at the same time as this course.
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
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.

VET 211 Veterinary Laboratory Techniques II
Requisites: Take VET-131 - Must be completed prior to taking this course. Take VET-213 - Must be taken either prior to or at the same time as this course.
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 212 Veterinary Laboratory Techniques III
Requisites: Take VET-211 - Must be completed prior to taking this course. Take VET-214 - Must be taken either prior to or at the same time as this course.
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 213 Veterinary Clinical Practice II
Requisites: Take VET-133 - Must be completed prior to taking this course.
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.

VET 214 Veterinary Clinical Practice III
Requisites: Take VET-213 - Must be completed prior to taking this course.
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.

VET 215 Veterinary Pharmacology
Requisites: Take One Set: Set 1: CHM-130 and CHM-130A Set 2: CHM-151 - Must be completed prior to taking this course. Take VET-213 - Must be taken either prior to or at the same time as this course.
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.

VET 217 Large Animal Clinical Practice

Requisites: Take VET-120 - Must be completed prior to taking this course. Take VET-213 - Must be taken either prior to or at the same time as this course.

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 237 Animal Nutrition

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.

WBL 112 Work-Based Learning I

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.