

Veterinary Science CDE

Purpose

The purpose of the Veterinary Science CDE is to provide a competitive event for agricultural education students, provide opportunities for participants to develop technical knowledge, and demonstrate practical skills in the field of veterinary science.

State Event Superintendent

Carmen Bracey, State FFA Coordinator, Department of Agricultural and Human Sciences, NCSU, Box 7654, Raleigh, NC 27695-7654. Phone: 919.513.0216

Fax: 919.513.3201 Email: carmen_bracey@ncsu.edu

Eligibility and General Guidelines

This event is open to all FFA chapters and FFA members in good standing. FFA Members may not participate in a Career Development Event that leads to a state level event after July 1, following the high school/early college graduation. Members winning a previous state event in this area or that have participated in a previous national event in this area are ineligible.

Each chapter may send one team to compete at the state event. **Teams shall consist of three or four members. Four scores will count towards the team total (A three-member team will earn a zero for the 4th score).** No alternates are allowed in state events. Any alternate found participating in a state event will result in team disqualification.

FFA members in good standing may also participate as individuals in this event. A chapter may have up to two members participating as individuals as long as the chapter does not have a team participating in the event. Their scores will only count toward individual recognition and will not be tallied as a team score.

The use or possession of cellular phones or any other mobile electronic communication device is prohibited during any state-level career development event. Any violation of this rule by any team member will result in total team disqualification.

FFA members participating in career development events that require the use of calculators may only use non-programmable/graphing calculators that do not have the ability to communicate with other calculators. Calculators will be screened prior to the start of a CDE for acceptability. Students caught using data stored on a calculator or communicating with other calculators will result in a total team disqualification for the event.

Any member found cheating in any state-level career development event will result in total team disqualification for that event.

The North Carolina FFA Association, in keeping with the FFA mission and purposes, does not permit the use of tobacco products, e-cigarettes, vapes, or Juuls at any FFA facility or at any FFA activity.



In compliance with the Americans with Disabilities Act, North Carolina FFA will honor requests for reasonable accommodations made by individuals with disabilities. Please direct accommodation requests through the CDE/LDE Accommodation Request Form. If the accommodation can be made for all and/or doesn't provide an unfair advantage, then every effort will be made to provide the accommodation. Requests can be accommodated more effectively if notice is provided at least 10 days before the event.

Middle School Participation

Middle school students and teams may participate in any Career Development Event or Leadership Development Event. The top three middle school participants will be recognized. Middle school participants should designate during registration.

Dress Code

Participants are required to follow the North Carolina FFA Career Development Event Dress Code. Participants in this event are required to wear long pants and an appropriate shirt with a collar or an appropriate FFA or school t-shirt. **Students may also wear scrubs.**

The North Carolina FFA Association strives to promote a positive image at all Official FFA Events. The dress code policy was established to address the issue of appropriate attire at all Official FFA Events. Members should adhere to this policy for all events. A ten percent reduction will be applied to all individual scores from a chapter if a participant from that chapter violates the dress code during that career event.

Procedures for Administering the Event

Part I: Multiple Choice Exam - 100 Points

The written exam will be twenty-five (25) multiple-choice items designed to determine each team member's understanding of the Veterinary Science industry. All questions will come from the *Veterinary Assisting: Fundamentals and Applications* textbook written by Beth Vanhorn and Robert Clark published by CENGAGE Learning. **Students will have 30 minutes to complete the written exam.** Exam questions will come from the following topics and chapters by year:

2021 - Veterinary Medical Terminology and Abbreviations (1), Breed Identification and Production Management (9), Rabbit Identification and Production Management (12), The Structure of Living Things (26), The Renal System (32), Animal Nutrition (37), and Veterinary Assisting Procedures (47).

2022 - Veterinary Medical Terminology and Abbreviations (1), Pocket Pet Health and Production Management (11), Ornamental Fish Identification and Production Management (14), Equine Breed Identification and Production Management (19), The Digestive System (28), The Reproductive System (33), Animal Nutrition (37), and Veterinary Assisting Procedures (47).

2023 - Veterinary Medical Terminology and Abbreviations (1), Reptile and Amphibian Breed Identification and Production Management, Beef and Dairy Cattle Breed Identification and Production Management (18), Zoo and Exotic Animal Production Management (16), The Respiratory System (30), The Endocrine System (31), Animal Nutrition (37), and Veterinary Assisting Procedures (47).



2024 - Veterinary Medical Terminology and Abbreviations (1), Poultry Breed Identification and Production Management (24), Sheep Breed Identification and Production Management (22), Goat Breed Identification and Production Management (23), The Immune System (34), Microbiology and Parasitology as Disease Processes (38), Animal Nutrition (37), and Veterinary Assisting Procedures (47).

2025 - Veterinary Medical Terminology and Abbreviations (1), Dog Breed Identification and Production Management (8), Avian Breed Identification and Production Management (10), Circulatory System (29), Musculoskeletal System (27), Animal Nutrition (37), and Veterinary Assisting Procedures (47)

Part II: Math Applications Exam – 100 Points

Students will complete clinical math problems similar to those included in the National FFA CDE. **Students will have 30 minutes to complete this exam.**

Part III: Practicums - 80 Points

Clinical procedures (50 points): Students will complete <u>one</u> of the following (Page numbers refer to the National FFA Veterinary Science CDE Guide 2017-2021): Administering Ophthalmic Medication page 22, Filling a Syringe for Injection Page 26, Surgical Site Preparation Page 30, Prescription Filling page 31

Handling and restraint procedures (30 points): Students will complete <u>one</u> of the following (Page numbers refer to the National FFA Veterinary Science CDE Guide 2017-2021): Applying a Cat Muzzle page 35, Restraint of Cat Jugular Venipuncture page 37, Applying a Gauze Dog Muzzle page 39, Restrain of a Dog for Cephalic Venipuncture page 43

Part IV: Identification - 100 Points

Each participant will identify the following (See additional pages):

- A. Equipment from amended list from National 10 pieces
- B. Parasites from amended list from Nationals 10 parasites
- C. Breeds from amended list from National 5 breeds
 - 2021 Small animal breeds (including cats, rabbits, poultry, birds, small mammals and reptiles)
 - 2022 Dog breeds
 - 2023 Large animal breeds
 - 2024 Small animal breeds (including cats, rabbits, poultry, birds, small mammals and reptiles)
 - 2025 Dog breeds



Scoring

Maximum Score	380
Multiple Choice Exam	100
Math Applications Exam	100
Clinical Procedures	50
Handling and Restraint Procedures	30
Identification	100

Procedure for Determining the State Event Winner When Scores are Tied

In the event a tie score exists, apply the following methods in sequential order until the tie is broken:

- 1. Compare the total team scores for the multiple choice exam and the higher scoring team is the winner.
- 2. Compare the total team scores for the identification component and the higher scoring team is the winner.
- 3. Compare the total team scores for the math exam and the higher scoring team is the winner.
- 4. Compare the total team scores for the clinical practicum and the higher scoring team is the winner.
- 5. If teams continue to be tied, a new event will be held to determine the winning team.

Procedure for Determining the High Scoring Individual When Scores are Tied

In the event that a tie score exists, apply the following methods in sequential order until the tie is broken.

- Compare the individual scores for the identification component and the higher contestant is the winner.
- 2. Compare the individual scores for the math exam and the higher scoring contestant is the winner.
- 3. Compare the individual scores for the clinical practicum and the higher scoring contestant is the winner.
- 4. If individual continue to be tied present cowinners.

State Awards

The awards for the state event will be presented annually at the state FFA convention to include a team 1st, 2nd and 3rd place plaque and a travel monetary award. The high scoring individual will receive a plaque.



National Career Development Event Participation

State winning teams advancing to national career development event participation will be automatically registered for the national event. It is the

responsibility of the Chapter FFA Advisor to complete all necessary national certification forms and return them to the State FFA Coordinator by the assigned due date.

State winning CDE teams that choose not to participate at the national level should contact the state office by Sept. 1 prior to National Convention. Teams that fail to inform the state office prior to Sept. 1 will be ineligible to participate in that same CDE for the next year (chapters may appeal to the State FFA Board of Directors). Teams that do not compete at the National Convention will be required to pay back the travel award.

Primary References

Veterinary Assisting: Fundamentals and Applications. Vanhorn, Clark. ISBN: 978-1-4354-5387-6

National FFA Career Development Events: Veterinary Science CDE guide



North Carolina FFA Veterinary Science Career Development Event Equipment List

Ambubag	Hoof knife
Anesthetic machines	Hoof rasp
Autoclave	IV administration set
Autoclave tape indicator	Laparoscope
Backhaus towel clamps	Laryngoscopes
Balling gun	Muzzle – basket
Bandaging material – Elasticon	Muzzle – nylon
Bandaging material – roll gauze	Needle holder - Mayo-Hegar
Bandaging material – vet wrap	Needle holder - Olsen Hegar
Bands (castration or docking)	Obstetrical chain and handle
Cat bag	Ophthalmoscope
Catch pole (dog snare)	Otoscope
Catheter – butterfly	Pig tooth nippers
Catheter – IV	Radiology personal protective equipment
Catheter – tomcat urinary	Rectal prolapse ring - swine
Centrifuge	Rumen magnet
Chemical indicator strips	Scalpel blade
Cold sterile tray	Scalpel handle
Dehorner – Barnes	Scissors – Suture wire cutting
Dehorner - electric	Scissors – Bandage
Dental floats	Scissors – Lister bandage
Dental scaler	Scissors – Littauer suture removal
Drench gun - small ruminant	Scissors – Mayo dissecting
Ear notcher	Scissors – Metzenbaum dissecting
Elastrator	Silver nitrate sticks
Elizabethian collar	Small animal oxygen cage
Emasculators	Snook ovariohysterectomy hook
Endoscope	Speculum – large animal oral
Endotracheal tubes	Speculum – small animal oral
Fecal loop	Speculum – vaginal
Fecalyzers	Squeeze chute
Feeding tube for small animals	Staple remover
Fetal extractor-calf	Stethoscope
Forceps – Alligator	Surgical drapes
Forceps – Allis tissue	Suture needle – cutting
Forceps – Babcock tissue	Suture needle - taper
Forceps – Brown-Adson thumb	Syringe – automatic, multi-dose
Forceps – Crile	Tattooing instruments – small and large
Forceps – Kelly	Tonometer
Forceps – Halstead mosquito hemostatic	Tourniquet
Forceps – Rat tooth thumb	Trocar and cannula
Gravity feeder/ J tube	Twitch chain
Head gate	Twitch handle
Hog snare	



North Carolina FFA Veterinary Science Career Development Event Parasites/Microscopic ID

	Taenia Tapeworm Segment (Family Taeniidae;
Blowfly (Family Calliphoridae)	Genus Taenia)
Cat Warble (Genus Cuterebra)	Tick- American Dog (Family Dermacentor; Genus
Cocci (bacteria)	Variabilis)
Coccidia (Genus Isospora or Eimeria)	Tick- Black Legged Deer (Family Ixodes; Genus
Demodectic Mite (Genus Demodex)	Scapularis)
Ear Mite (Family Ascaridae; Genus Otodectes)	Whipworm (Genus Trichuris)
Eosinophils	Whipworm Egg (Genus Trichuris)
Fleas (Genus Ctenocephalides)	Yeast
Flea Larva (Genus Ctenocephalides)	
Flea Tapeworm Egg (Genus Dipylidium)	
Flea Tapeworm Segment (Genus Dipylidium)	
Giardia (Genus Giardia)	
Heartworm Adult (Genus Dirofilaria)	
Heartworm Microfilaria (Genus Dirofilaria)	
Hookworm Adult (Family Ancylostomatidae; Genus	
Ancylostoma, Uncinaria, Bunostomum or	
Globocephalus)	
Hookworm Egg (Family Ancylostomatidae; Genus	
Ancylostoma, Uncinaria, Bunostomum or	
Globocephalus)	
Horse Bots (Genus Gasterophilus)	
Horse Strongyles (Family Strongylidae; Genus	
Strongylus)	
Lice - Biting (Order Mallophaga; Genus Bovicola or	
Trichodectes)	
Lice - Sucking (Order Anoplura; Genus	
Linognathus or Hematopinus)	
Liver Fluke (Class Trematoda; Genus Fasciola,	
Fascioloides or Dicrocoelium)	
Mosquito Adult (Family Culicidae; Genus	
Anopheles, Culex or Aedes)	
Mosquito Larva (Family Culicidae; Genus	
Anopheles, Culex or Aedes)	
Red Blood Cell	
Roundworm Adult (Family Ascarididae or	
Toxocaridae; Genus Toxocara, Toxascaris,	
Ascaris, Parascaris or Neoascaris)	
Roundworm Egg (Family Ascarididae or	
Toxocaridae; Genus Toxocara, Toxascaris,	
Ascaris, Parascaris or Neoascaris)	
Sarcoptic Mite (Family Ascaridae; Genus Sarcoptes	
or Notoedres)	
Taenia Tapeworm (Family Taeniidae; Genus Taenia	
Taenia Tapeworm Egg (Family Taeniidae; Genus	
Taenia)	



North Carolina FFA Veterinary Science Career Development Event

Identification Small Animal Breeds

Place the number of the species beside the correct name (four points each).

	BIRDS	REPTILES
CATS	Cockatiel	Chameleon
Abyssinian	Cockatoos	Gecko
American Shorthair	Love Birds	Iguana
Burmese	Parakeet	Lizard
Maine Coon	African Gray Parrot	Bearded Dragon
Manx	Canary	
Persian	Macaw	POULTRY
Ragdoll	Sun Conure	Chicken-Cornish
Russian Blue	Zebra Finch	Chicken-Leghorn
Siamese		Chicken-Plymouth Rock
Sphynx	SMALL MAMMALS	Chicken-Rhode Island Red
	Chinabilla	Duck
	Chinchilla	Goose
RABBITS	Ferret	Quail
Angora	Gerbil	Turkey
Californian	Guinea Pig	
Dutch	Hamster	
English Spot	Hedgehog	
 - ·	Sugar Glider	
Netherland Dwarf		
Mini-Rex		



North Carolina FFA Veterinary Science Career Development Event Identification Large Animal Breeds

Place the number of the species beside the correct name (four points each)

DAIRY BREEDS	HORSE BREEDS	
Ayshire	Appaloosa	SHEEP BREEDS
Brown Swiss	Arabian	Columbia
Guernsey	Belgian	Dorper
Holstein	Clydesdale	Dorset
Jersey	Morgan	Hampshire
	Paint	Merino
BEEF CATTLE BREEDS	Percheron	Rambouillet
Angus	Quarter Horse	Southdown
Brahman	Saddlebred	Suffolk
Charolais	Tennessee Walking Horse	
Hereford	Thoroughbred	
Shorthorn	1 noroughored	
Simmental	GOAT BREEDS	
SWINE BREEDS	Alpine	
American Landrace	Nubian	
Berkshire	Angora	
Chester White	Boer	
Duroc	LaMancha	
Hampshire	Oberhasli	
Yorkshire	Pygmy	
IOIRSIIIIC	Saanen	
	Toggenburg	



Terrier

North Carolina FFA Veterinary Science Career Development Event Identification Dog Breeds

Place the number of the species beside the correct name (four points each)

SPORTING GROUP		
Brittany	HERDING GROUP	TOY GROUP
Cocker Spaniel		
English Setter	Australian Cattle Dog	Cavalier King Charles
German Shorthaired	Australian Shepherd	Spaniel
Pointer	Border Collie	Chihuahua
Golden Retriever	Collie	Miniature Pinscher
Irish Setter	German Shepherd Dog	Papillon
Labrador Retriever	Old English Sheepdog	Pekingese
	Pembroke Welsh Corgi	Pomeranian
	Shetland Sheepdog	Poodle
NON-SPORTING GROUP		Pug
	WORKING GROUP	Shih Tzu
Bichon Frise		Yorkshire Terrier
Boston Terrier	Bernese Mountain Dog	
Bulldog	Boxer	HOUND GROUP
Chinese Shar-Pei	Doberman Pinscher	
Chow Chow	Great Dane	Afghan Hound
Dalmatian	Great Pyrenees	Basenji
Poodle	Mastiff	Basset Hound
	Newfoundland	Beagle
TERRIER GROUP	Portuguese Water Dog	Black and Tan Coonhound
	Rottweiler	Bloodhound
Bull Terrier	Saint Bernard	Dachshund
Cairn Terrier	Siberian Husky	Greyhound
Parson Russell Terrier	Standard Schnauzer	Rhodesian Ridgeback
Scottish Terrier		
West Highland White		



Clinical Procedures Practicum Administering Ophthalmic Medication

Participant must talk through practicum steps with judge.

CRITERIA	Points Possible	Points Earned
The student wipes any discharge from the patient's eye using a gauze sponge or cotton ball.	8	
The student opens the end of the ophthalmic medicine.	6	
The student uses the index finger and thumb to pull the upper and lower lids apart to open the eye. The student's thumb pulls the lower lid down and the index finger pulls the upper lid upward. The student's other finger may rest on the head of the animal.	12	
While resting the hand holding the medication on the head of the patient, the student applies the drops or ointment gently into the eye without touching the eye, counting each drop or applying the proper amount of ointment without contamination.	12	
The student releases the eyelids.	6	
The student allows the animal to blink to move the medication throughout the eye.	6	
TOTAL POINTS	50	



Clinical Procedures Practicum Filling a Syringe for Injection

Participant must talk through practicum steps with judge.

CRITERIA	POINTS POSSIBLE	POINTS EARNED
The student determines the amount to be place in the syringe		
	6	
The student selects the proper-sized syringe	8	
The student inserts the syringe into the top of the bottle	6	
The student places the bottle upside down in one hand and holds securely.	6	
The students withdraws the proper volume	6	
The student removes the syringe from the bottle	6	
The student gently taps or snaps the edge of the syringe to remove any air		
bubbles, or slightly expel the air by pushing the end of the plunger.	6	
The student places syringe in the sharps container.	6	
TOTAL POINTS	50	



Clinical Procedures Practicum Surgical Site Preparation

Participants must talk through practicum steps with judges.

CRITERIA	POINTS POSSIBLE	POINTS EARNED
The student applied antiseptic scrub to the clipped area	TOSSIBLE	EARIVED
	8	
The student prepped the clipped area with a clean surgical sponge		
beginning at the incision site moving in a circular motion and	8	
worked toward the edges.		
The student did not bring the sponge back to the incision site once it		
was moved away from the incision site.	8	
The student discarded the sponge once it reached the edge of the		
clipped area.	8	
The student wiped the clipped area with a rinse solution using a		
clean surgical sponge following the same pattern as when scrubbing	8	
with the antiseptic.		
The student repeated the scrub and rinse a minimum of three times		
or until the final rinse sponge was clean.	10	
TOTAL POINTS	50	



Clinical Procedures Practicum Prescription Filling

Participants must talk through practicum steps with judges.

CRITERIA	POINTS	POINTS
	POSSIBLE	EARNED
The student reads and verbally interprets prescription.		
	10	
The student selects the correct drug and concentration		
	20	
The student places the pill counting tray on the pharmacy counter with		
the channel to the left and the open plate in front of him/her.	1	
The student pours the medication tablets or capsules onto the tray		
plate.	1	
The student opens the channel cover.		
	1	
The student uses a spatula or tongue depressor to push groups of		
tablets or capsules into the channel.	1	
When the student has counted the desired amount of medication, he/she		
closes the channel cover. The student tilts the tray to return the unused	4	
medicine into the stock bottle		
The student lifts the tray to place the channel spout into the medicine		
vial and transfer medication.	4	
The student places the lid on the vial and sets it on the counter.		
	1	
The student appropriately fills out label with prescription information.		
	7	
TOTAL POINTS	50	



Handling and Restraining Practicum Applying a Cat Muzzle

Participants must talk through practicum steps with judge.

CRITERIA	POINTS POSSIBLE	POINTS EARNED
The student opens the cage door and calls the cat by name		
	2	
The student scruffs the cat with one hand and lifts it up.		
	2	
The student cradles the cat's abdomen with their other hand and		
removes the cat from the cage.	2	
With the cat still scruffed, the student places the cat under one arm		
close to their body and closes the cage door with their free hand.	2	
The student places cat on table.		
F F	2	
The student selects a muzzle of appropriate size for the cat.		
The state of the same and the same and the same and	5	
The student places the cat in setting or sternal position on exam table.		
The student places the eat in setting of sternar position on exam table.	2	
The student resitions the muzzle preparty in his/her hands	<u> </u>	
The student positions the muzzle properly in his/her hands	3	
	3	
The student approaches the cat from behind with the muzzle in both		
hands while another person restrains cat.	3	
The student brings the muzzle up to the cat's face in one swift motion.		
	4	
The student secures the muzzle.		
	3	
MOTAL POWER		
TOTAL POINTS	30	



Handling and Restraining Practicum

Restraint of the Cat for Jugular Venipuncture

Participants must talk through practicums steps with judges.

CRITERIA	POINTS	POINTS
	POSSIBLE	EARNED
The student places the cat in sternal recumbency with its chest close to		
the edge of the table.	6	
The student controls and lifts the head up by placing thumb and		
forefingers over top of head, fingers firm on zygomatic arches (below	7	
eyes).		
The student's other hand grasps the front legs and extends them down		
off the edge of the table.	7	
The student uses arm and elbow to restrain the cat's body close to the		
student's body.	6	
The student spoke to the patient in a calm and affectionate manner		
during the procedure	4	
TOTAL POINTS	30	



Handling and Restraining Practicum Applying a Gauze Dog Muzzle

Participant must talk through practicum steps with judge.

CRITERIA	POINTS POSSIBLE	POINTS EARNED
The student selects proper type of material and length.	4	
The student places the dog in sitting or sternal position on exam table or floor.	2	
The student makes a loop in the gauze and approaches the dog from behind.	6	
The student places the loop on the dog's face with the tie on top.	6	
The student quickly tightens the loop, and then crosses the ends under the dog's face.	6	
The student brings the ends back behind the dog's head under the ears and ties in a quick-release bow.	6	
TOTAL POINTS	30	



Handling and Restraining Practicum Restraint of the Dog for Cephalic Venipuncture

Participants must talk through practicum steps with judge.

CRITERIA	POINTS	POINTS
	POSSIBLE	EARNED
The student places a noose leash on the dog.		
-	2	
The student restrains the dog in sternal recumbency.		
	5	
The student stands on the dog's right side; wrapping his/her right		
arm around the dog's neck.	5	
The student holds the dog's left forelimb with elbow in the palm of		
his/her hand; extends the limb forward toward the person	6	
performing the procedure.		
With the elbow of the dog in his/her palm, the student rotates		
his/her thumb up so it is on top of the limb at the bend of the	6	
elbow.		
The student occludes the vessel with the thumb, rotates the thumb		
laterally.	6	
TOTAL POINTS	30	