

Veterinary Science

Dress Code	Attire appropriate to the occupational area
SLC Orientation	Event explained to the competitors and individual time cards handed out. Students will return to the event room at least 5 minutes before their allotted time. Students will have a secret scenario to solve when it is their turn to compete. Students should not share the secret scenario when they leave the event as it is an automatic disqualification.
Round # 1	Competitors must submit technical skill video to Montana HOSA by deadline. Additionally, competitors will take an online test during the testing window. Advisors will be informed of which competitors have moved on from Round 1 to qualify to participate in Round 2 at SLC.
Round # 2	Skill procedures from rubric guidelines will be performed by each competitor. Competitors may be asked to do one or multiple of the performance skills.
Scoring	Round 1 online testing scores will be combined with Round 2 skill procedures for a total score.

Official References

The below references are used in the development of the test questions and skill rating sheets.

- a. [Lawhead, James and Baker. *Introduction to Veterinary Science*. Cengage Learning. Latest Edition.](#)
- b. [Sirois, M. and Wortinger, A. *Principles and Practice of Veterinary Technology*. Elsevier. Latest Edition.](#)
- c. Reference for Skill VII: [Preparing a Feline for Exam AAFP and ISFM Feline-Friendly Handling Guidelines](#)
- d. References for Companion Animal Breeds/Species Identification: (as posted as of Sept. 1, 2023)
 - Dogs = American Kennel Club - www.akc.org
 - Cats = The Cat Fanciers' Association - www.cfainc.org

Round One Test

[Test Instructions:](#) The written test will consist of 50 multiple-choice items in a maximum of 60 minutes.

Written Test Plan (Includes both Large and Small Animals)

The written test plan for Veterinary Science is:

- Anatomy and Physiology - 24%
- Basic Nutrients - 10%
- Animal Behavior - 6%
- Diseases/Disease Prevention - 14%
- Zoonoses - 6%
- Clinical Practice - 10%
- Emergency Care/First Aid - 12%
- Principles of Surgery - 12%
- Ethical, Legal, and Safety - 6%

Sample Test Questions

1. How many days is a cat's average length of pregnancy? (Lawhead pp 140)
 - A. 15 - 20
 - B. 30 - 35
 - C. 58 - 65**
 - D. 90 - 112

2. Which procedure is used when performing a surgical site prep scrub? (Sirois pp 383)
 - A. Scrub from the area with alcohol after removing the hair
 - B. Scrub from the intended incision area outward in concentric circles**
 - C. Scrub from the outside of the shaved area to the central area
 - D. Scrub in large, straight strokes across the surgical area

3. What type of organism causes ringworm in animals? (Lawhead pp 248)
 - A. Bacteria
 - B. Parasite
 - C. Virus
 - D. Fungus**

Round Two Skills

Round Two is a selected skill(s) performance. The skills approved for this event are:

Skill I: Identify *Instruments/Equipment* 15 minutes
 Numbered Instruments (15) or photos from list:

Ambu Bag	Endotracheal Tubes & Laryngoscope	Mouth Speculum	Sharps Container
Autoclave	Fecal Floatation Kits	Needle Holders	Splints
Bair Hugger Warming Unit	Hoof Testers	Patient Warming System	Surgical Pack
Balling Gun	Insulin Syringe	Penrose Drains	Tetotomy or Iris Scissors
Barnes Dehormer	Lavage System	Pulse Oximeter	Through the Needle Catheter
Binocular Microscope	Leukopet System	Radiograph Machine	Tissue Forceps
Butterfly Catheter	Mayo Scissors	Reagent Strip Test	Tooth Float
Cattle Prod	Mayo Stand	Scalpel Blades	Trocar
Colostrometer	Mobile Crash Cart	Semi-Automated External Defibrillator	Urinary Catheters
	Mobile X-Ray Unit	Senn Or Rake Retractor	Vacutainer

Skill II: Identification of Companion Animal Breeds/Species 8 minutes
 Skill III: Preparation of the Operative Site 7 minutes
 Skill IV: Simple Fecal Flotation 5 minutes
 Skill V: Lifting and Restraining a Dog 4 minutes
 Skill VI: Wrapping a Surgical Pack 3 minutes
 Skill VII: Preparing a Feline to Obtain a Temperature 6 minutes

(FOR ALL SKILLS, BODY FLUIDS WILL BE A SIMULATED PRODUCT & LIVE ANIMALS ARE NOT USED)

Skills I and/or II may be administered with the Round One written test.

The selected skill(s) will be presented to competitors as a written scenario at the beginning of the round. The scenario will be the same for each competitor. Some scenarios may involve the combination of multiple skill sheets, in which case some elements may not be scored due either to being duplicative or not appropriate within the scenario. A sample scenario can be found [here](#).

The scenario is a secret topic. Competitors MAY NOT discuss or reveal the secret topic until after the event has concluded or will face penalties per [the GRRs](#).

Competitor Must Provide:

- Sterile non-latex surgical gloves
- Exam non-latex gloves

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Competitor #: _____ Judge's Initials: _____ Total Points (45 poss.) _____

Skill I: Identify Equipment and Instruments (Time: 15 minutes)

Name of Instrument	Points (1 each for name & spelling)	Purpose or Use	Points (1 point for correct purpose/use)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
TOTAL: ID & Spelling (30 poss)		TOTAL: Purpose (15 poss.)	

VETERINARY SCIENCE

Competitor #: _____ Judge's Initials: _____ Total Points (30 possible.) _____

Skill II: Identification of Companion Animal Breeds/Species (Time: 8 Minutes)

	Companion Animal Breed Species	One point for correct identification	One point for correct spelling
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
TOTAL:		TOTAL: ID (15)	TOTAL: Spelling(15)

VETERINARY SCIENCE

Section # _____ Division: _____ SS _____ PS/Collegiate
 Competitor # _____ Judge's Signature _____

Animals at ILC will not be live animals. Stuffed animals will be used.

Skill III: Preparation of the Operative Site (Time: 7 minutes)	Possible		Awarded
1. Washed hands or used alcohol based hand-rub for hand hygiene.	2	0	
2. Verified the patient's identity.	2	0	
3. Verified surgical skill being performed and surgical site.	2	0	
4. Checked progress notes to assure that patient was bathed and surgical site clipped and scrubbed and urine was expressed from bladder.	2	0	
5. Assembled materials for prep.	1	0	
6. Positioned patient on back and secured legs with tape.	1	0	
7. Opened sterile packages: bowl and gauze using aseptic technique.	2	0	
8. Dropped four (4) gauze sponges into a sterile bowl and then poured germicide to cover sponges, using aseptic technique.	2	0	
9. Donned sterile gloves correctly.	2	0	
10. Handled gauze sponges with sterile sponge forceps or the gloved hand using aseptic technique.	2	0	
11. Began scrub at the intended incision site and continued out in concentric circles to an area of at least two inches larger than expected size of sterile field.	2	0	
12. Sponge discarded after reaching the periphery.	2	0	
13. Repeated steps 10, 11 & 12 two more times.	3	0	
14. Blotted excess germicide solution with sterile gauze sponge(s).	1	0	
15. Sprayed 10% Povidone Iodine solution on site.	1	0	
16. Removed gloves and washed hands or used alcohol based hand-rub for hand hygiene.	2	0	
17. Used appropriate verbal and nonverbal communication with patient and other personnel.	2	0	
TOTAL POINTS -- SKILL I	31		
70% Mastery for Skill I = 21.7			

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Section # _____ Division: _____ SS _____ PS/Collegiate
 Competitor # _____ Judge's Signature _____

Skill IV Simple Fecal Flotation (Time: 5 minutes)	Possible		Awarded
1. Washed hands or used alcohol based hand-rub for hand hygiene	2	0	
2. Applied non-latex exam gloves.	2	0	
3. Assembled equipment and supplies.	1	0	
4. Placed approximately 2 – 5 g of feces in a paper cup.	1	0	
5. Add 30 ml of flotation solution.	1	0	
6. Using the tongue depressor, mix the feces to produce an evenly suspended emulsion.	1	0	
7. Poured the suspension through a 10 cm (4"x4") gauze square into another cup.	1	0	
8. Filled the shell vial (or 15 ml conical centrifuge tube) with the filtered solution to form a convex dome (meniscus) at the rim.	1	0	
9. Placed a cover slip on top of the meniscus.	1	0	
10. Verbalized leaving the cover slip in place for 10 – 20 minutes.	1	0	
11. Picked the cover slip straight up and placed on a glass slide, fluid side down.	1	0	
12. Removed non-latex gloves and washed hands or used alcohol based hand-rub for hand hygiene.	2	0	
TOTAL POINTS – SKILL IV	15		
70% Mastery for Skill IV = 10.5			

VETERINARY SCIENCE

Section # _____ Division: _____ SS _____ PS/Collegiate
 Competitor # _____ Judge's Signature _____

Note: The competitor may be asked to perform all three lifts -small, medium or large dog, combination of lifts, or a single lift for this skill. Competitors may also be asked to verbalize the process for lifting a large dog. Simulation of the cephalic venipuncture may be done on any of the sized dogs. Animals will not be live animals; stuffed animals will be used.

Skill V: Lifting and Restraining a Dog (Time: 4 minutes)	Possible	Awarded
1. Washed hands or used alcohol based hand-rub for hand hygiene.	2 0	
2. Lifted the small dog onto the table, holding the dog draped over a forearm with the other hand holding on to the head just below the mandible.	1 0	
3. Lifted the small dog off the table and back to the floor, using correct body mechanics and lifting technique.	1 0	
4. Lifted the medium-sized dog onto the table, with one arm around the neck and the other arm around the rear end.	1 0	
5. Held the medium-sized dog in a standing position by placing one arm around the dog's neck and the other around the abdomen, and hugging the dog close to the body.	1 0	
* Judge states "Place the dog in a sitting position for a cephalic venipuncture."		
6. Placed patient on the table near one end, facing the edge, in the sitting position.	2 0	
7. Restrained the patient's head by reaching under the neck, placing the hand behind the jaw and pressing the patient's head against the person's chest.	2 0	
8. Used other arm to reach around rear of the dog and pull dog close to the body.	2 0	
9. Moved arm that was holding the rear across the shoulders and grasped the leg opposite their body.	2 0	
10. Held the leg by placing the elbow of the dog into the palm of that hand and pushing the leg forward.	2 0	
11. Placed thumb on top of the leg, squeezing and rotating laterally, to occlude the vein. * Judge states, "venipuncture is complete, and blood is drawn."	2 0	
12. Released thumb after the blood was drawn.	2 0	
13. Verbalized the proper technique for lifting a large dog.	1 0	
14. Used appropriate verbal and nonverbal communication with patient and other personnel.	2 0	
15. Washed hands or used alcohol based hand-rub for hand hygiene.	2 0	
TOTAL POINTS – SKILL II 70% Mastery for Skill II = 17.5	25	

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Section # _____
 Competitor # _____

Division: _____ SS _____ PS/Collegiate
 Judge's Signature _____

Skill #	Wrapping a Surgical Pack (Time: 3 minutes)	Possible		Awarded
1.	Assembled equipment and supplies.	1	0	
2.	Washed hands or used alcohol based hand-rub for hand hygiene.	2	0	
3.	Placed a large unfolded wrap diagonally in front of you.	2	0	
4.	Placed the instrument tray in the center of the wrap so that an imaginary line can be drawn from one corner of the wrap to the opposite corner and is perpendicular to the two sides of the instrument tray.	2	0	
5.	Folded the corner of the wrap that is closest over the instrument tray to its far side, tucked it underneath the tray with a tab out.	2	0	
6.	Folded the right corner over the pack two-thirds of the way to the opposite side.	2	0	
7.	Folded the left corner over the pack two-thirds of the way to the opposite side.	2	0	
8.	Folded the final corner.	2	0	
	a. Folded the final corner down.	2	0	
	b. Tucked the fold under the previous two folds.	2	0	
	c. Folded the tip of the final fold so it is exposed for easy unwrapping.	2	0	
9.	Wrapped the pack in a second layer of cloth or paper, secured the final tab with autoclave or gas sterilization indicator tape for ease of grasping and opening.	2	0	
10.	Returned equipment and supplies.	2	0	
11.	Washed hands or used alcohol based hand-rub for hand hygiene.	2	0	
TOTAL POINTS -- SKILL VI		25		
70% Mastery of Skill = 17.5				

VETERINARY SCIENCE

Section # _____ Division: _____ SS _____ PS/Collegiate
 Competitor # _____ Judge's Signature _____

Note: The judge will verbalize the temperature. In standard practice, please note that all feline visits should be at least 15 minutes to follow the American Association of Feline Practitioners motto of "Go Slow to Go Fast." For HOSA purposes, this skill time has been reduced so that competitors can demonstrate sufficient knowledge of the appropriate steps on a stuffed animal.

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Skill VII: Preparing a Feline to Obtain a Temperature (Time: 6 minutes)	Possible	Awarded
1. Washed hands or used alcohol based hand-rub for hand hygiene.	1	0
2. Gathered and prepared equipment needed for skill.	1	0
3. Sprayed the area where cat will be seen with a synthetic FFP analog to promote calming and decrease anxiety.	2	0
4. Greeted cat & client by name with moderated body language & voice.	2	0
5. Placed the carrier on the exam table and opened the door to the carrier as soon as you enter the room.	1	0
6. Verbalize "the animal history of the cat has been obtained."	1	0
<i>After obtaining the history, if the cat has left the carrier follow step 7 and skip 8 & 9. If the cat has not come out of the carrier skip step 7 and start again with step 8.</i>	-	
7. If the cat has left the carrier: Placed the carrier out of sight until the procedures are completed.	1	0
8. If the cat will not come out of the carrier: To decrease the cat's anxiety, placed a towel between the two halves of the carrier as you remove the top and front of the carrier.	1	0
9. Created a "tent" with the towel covering the cat. The cat remains accessible.	1	0
10. Used a towel to lightly swaddle the cat and placed on exam area (OR if cat is still in carrier, allowed to remain in bottom of carrier for the exam).	1	0
11. Placed hand on the top of the cat's head with the fingers pointed toward cat's nose using the first and fifth finger to hold each side of the head to prevent movement.	2	0
12. Attempted to massage or stroke the top of the head to relax the cat.	2	0
13. Observed for signs of increased anxiety in cat throughout procedure such as posture or facial changes. Reported observations to the judge. <i>*Judge states, "temperature has been taken and skill performed."</i>	4	0
14. Released cat by unwrapping towel OR removing towel tented on top of carrier.	1	0

Skill VII Preparing a Feline to Obtain a Temperature (con't) – Items Evaluated	Possible	Awarded
15. Verbalized "Owner will now comfort the cat and return the cat to the carrier."	1 0	
16. Used a calm, positive demeanor and worked at a consistent pace throughout the skill.	2 0	
17. Washed hands or used alcohol based hand-rub for hand hygiene.	2 0	
TOTAL POINTS -- SKILL VII Cat Left Carrier	24	
TOTAL POINTS -- SKILL VII Cat Did Not Leave Carrier	25	
70% Mastery for Skill VII = Cat Left Carrier = 16.8 70% Mastery for Skill VII = Cat Did Not Leave Carrier = 17.5		