

Phlebotomy

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.

New for 2024 – 2025 Skill IIIB – Venipuncture Using a Butterfly and Evacuated Tube Adaptor has been added.

Official References

The below references are used in the development of the test questions and skill rating sheets. AMT has developed numerous resources to support competitors in competition preparation. Visit <https://americanmedtech.org/HOSA> for more information.

- [Booth, Kathryn and Lillian Mundt. *Phlebotomy: A Competency Based Approach*. McGraw Hill, 5th edition.](#)
- [McCall, Ruth. *Phlebotomy Essentials*. Jones & Bartlett, Latest edition.](#)
- [AMT Resources](#)

Round One Test

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

Time Remaining Announcements: There will be NO verbal announcements for time remaining during ILC testing. All ILC testing will be completed in the Testing Center and competitors are responsible for monitoring their own time.

Written Test Plan

The test plan for Phlebotomy is:

- Obtaining Blood Samples (including which tubes are used for specific tests) - 42%
- Specimen Collection & Processing - 16%
- Time Management & Assignment Organization - 8%
- Professional Communications - 4%

- Clerical Skills & Duties - 4%
- Safety Standards & Procedures - 10%
- Legal, Ethical, & Professional Considerations - 8%
- Terminology, Anatomy, & Physiology - 8%

Sample Test Questions

1. Which of the following veins would be last-choice for venipuncture due to being close to the median nerve and the brachial artery? (McCall pp 233)
 - A. Median Cubital
 - B. Median Basilic Vein**
 - C. Median Vein
 - D. Median Cephalic Vein

2. Which of the following tubes would you invert gently six to eight times immediately after the blood draw? (McCall pp 458-459)
 - A. Yellow top
 - B. Royal blue top
 - C. Plain red top
 - D. Lavender top**

3. Which of the following White Blood Cells release histamine and heparin and are normally the least numerous? (Booth 138-139)
 - A. Lymphocytes
 - B. Eosinophils
 - C. Basophils**
 - D. Neutrophils

Round Two Skills

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

Skill I:	Handwashing	4 minutes
Skill II:	Tourniquet Application	2 minutes
Skill IIIA:	Routine ETS Venipuncture, Including Order of Draw	10 minutes
Skill IIIB:	Venipuncture Using a Butterfly & Evacuated Tube Adaptor, Including Order of Draw	10 minutes
Skill IV:	Steps to Follow if a Patient Starts to Faint During Venipuncture	5 minutes
Skill V:	Heel Puncture	5 minutes
Skill VI:	Removing Contaminated Gloves	3 minutes
Skill VII:	Accidental Arterial Stick	5 minutes
Skill VIII:	24-Hour Urine Collection	5 minutes

(FOR ALL SKILLS, BODY FLUIDS WILL BE A SIMULATED PRODUCT)

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](#).

Judges will provide competitors with information as the rating sheets directed. Competitors may ask questions of the judges while performing skills if the questions relate to the patient's condition and will be included in the scenario or judge script.

Competitors must provide:

- Non-latex gloves
- Sterile gloves

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Skill I: Handwashing (Time: 4 minutes)		<i>Possible</i>	<i>Awarded</i>
1.	Removed all jewelry.	2 0	
2.	Never allowed clothing to touch the sink, nor touched the inside of the sink with the hands.	2 0	
3.	Adjusted the water temperature to warm.	2 0	
4.	Wet hands liberally with fingertips pointing down.	2 0	
5.	Applied soap and worked up lather using a circular motion with friction.	2 0	
6.	Interlaced fingers to clean between them and rubbed vigorously to remove microorganisms.	2 0	
7.	Scratched the nails of one hand against the palm of the other hand to work soap under the nails.	2 0	
8.	Repeated scratching nails on the other hand.	2 0	
9.	Thoroughly washed the wrists.	2 0	
10.	Washed for 2 minutes at the start of workday, 20 seconds between patients and procedures, or 1 to 2 minutes if soiled. <i>Judge will state if start of workday, between patients, and if soiled.</i>	2 0	
11.	Rinsed hands with hands pointed down and lower than elbows.	2 0	
12.	Dried hands and wrists using a patting motion with a clean paper towel.	2 0	
13.	Discarded paper towel without touching receptacle.	2 0	
14.	If the sink is not foot operated, used a clean disposable towel to turn off the water faucet.	2 0	
TOTAL POINTS -- SKILL I		28	
70% Mastery for Skill I = 19.6			

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Steps are listed for right-handed individual. If left-handed, substitute dominant and nondominant, for right and left references.

This skill should be performed on a venipuncture arm.

Skill II: Tourniquet Application (Time: 2 minutes)		<i>Possible</i>	<i>Awarded</i>
1.	Placed the tourniquet around the arm 3-4 inches above the intended venipuncture site.	2 0	
2.	Grasped one side of the tourniquet in each hand a few inches from the end.	2 0	
3.	Applied a small amount of tension and maintained throughout the process.	2 0	
4.	Brought the two sides together and grasped them both between the thumb and forefinger of the right hand.	2 0	
5.	Reached over the right hand, and grasped the right side of the tourniquet between the thumb and forefinger of the left hand and released it from the grip of the right hand.	2 0	
6.	Crossed the left end over the right end near the left index finger, grasped both sides together between the thumb and forefinger of the left hand, close to the patient's arm.	2 0	
7.	Used either the left middle finger or the right index finger to tuck a portion of the left side under the right side and pulled into a loop.	2 0	
8.	Ends of tourniquet point toward the shoulder to avoid contamination of the blood collection site.	2 0	
9.	Verbalized to the judge that tourniquet remained on arm no longer than one minute.	2 0	
10.	Removed tourniquet.	2 0	
TOTAL POINTS -- SKILL II		20	
70% Mastery for Skill II = 14			

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Competitors will be given tube colors in the scenario and responsible for the draw's correct order.

A venipuncture arm should be used beginning with step #8

Skill IIIA: Routine ETS Venipuncture(Time: 10 minutes)		<i>Possible</i>		<i>Awarded</i>
1.	Reviewed test request/requisition (via the competition scenario)	2	0	
2.	Approached, greeted patient, and identified self.	2	0	
3.	Asked patient to state their full name and date of birth and to spell first and last name.	2	0	
4.	Verbally matched the patient identification to the requisition.	2	0	
5.	Explained the procedure and obtained consent.	2	0	
6.	Verified collection requirements and identified sensitivities and potential problems.	2	0	
7.	Sanitized hands and put on gloves. <i>(Competitor switches to venipuncture arm.)</i>	2	0	
8.	Positioned the phlebotomy arm for the venipuncture procedure.	2	0	
9.	Applied tourniquet 3 to 4 inches above the venipuncture, feeling slightly tight but not rolled or twisted.	2	0	
10.	Verbalized asked patient to clench fist.	1	0	
11.	Selected the vein in the antecubital area by palpating with the tip of the index finger.	1	0	
12.	Released tourniquet.	1	0	
13.	Visualized the location of the vein and noted the position in reference to hair, skin creases, scars, or a mole.	1	0	
14.	Cleaned selected puncture site using back and forth friction with adequate pressure to cleanse site.	2	0	
15.	Allowed the site to air dry.	1	0	
16.	Prepared the equipment by selecting appropriate equipment and attaching the needle to an ETS holder.	1	0	
17.	Reapplied the tourniquet.	1	0	
18.	Uncapped and inspected the needle.	2	0	
19.	Verbalized asked patient to remake a fist.	1	0	
20.	Drew the skin taut with the thumb by placing it 1 to 2 inches below the puncture site.	1	0	

Skill IIIA: Routine ETS Venipuncture (con't)		Possible	Awarded
21.	Warned the patient of needlestick.	1 0	
22.	Lined needle up with the vein and inserted needle with the bevel up using a smooth forward motion at a 15 - 30 degree angle.	2 0	
23.	Stopped advancing the needle when a decrease in resistance is felt and verbalized "asked patient to release their fist."	2 0	
24.	Grasped the short wings of the tube holder with the index and middle fingers.	1 0	
25.	Pushed the tube into the multi-draw needle with the thumb.	1 0	
26.	Prevented the device from moving throughout venipuncture.	1 0	
27.	Established blood flow and filled the tube until the vacuum was exhausted and the blood flow stopped.	1 0	
28.	Completed the blood draw in the correct order (the scenario will use all of the colored tubes). a. Light blue b. Red, red/gray mottled or gold stopper c. Light or dark green top, green/gray mottled d. Lavender/purple, pink, or white/pearl top	8 0	
29.	Removed the tourniquet when the last tube starts to fill.	1 0	
30.	Removed the needle in a smooth motion and activated needle safety feature.	1 0	
31.	Placed clean folded gauze pad over the site with free hand and applied pressure and mixed tubes per manufacturer's instructions.	1 0	
32.	Instructed patient to maintain pressure on venipuncture site until bleeding stops.	2 0	
33.	Checked the patient's arm for no additional bleeding and applied bandage.	1 0	
34..	Discarded blood collection unit in a biohazard sharps container.	2 0	
37.	Labeled and prepared tubes for handling and transport .in appropriate specimen bag.	1 0	
35..	Instructed patient to maintain pressure for a minimum of 15 minutes and tto protect arm from exertion.	2 0	
36.	Disposed of used materials appropriately and cleaned up workspace.	2 0	
37.	Thanked patient.	2 0	
38.	Removed and disposed of gloves, and washed hands or used alcohol-based handrub for hand hygiene.	2 0	
39.	Used appropriate verbal and nonverbal communication with patient and other personnel.	2 0	
40.	Practiced standard precautions throughout skill.	2 0	
TOTAL POINTS – SKILL IIIA 70% Mastery for Skill IIIA = 48.3		69	

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Competitor # _____ Judge's Signature _____

Competitors will be given tube colors in the scenario and responsible for the draw's correct order.

A venipuncture arm should be used beginning with step #8.

Skill IIIB: Venipuncture Using a Butterfly & Evacuated Tube Adaptor (Time: 10 minutes)		<i>Possible</i>	Awarded
1.	Reviewed test request/requisition (via the competition scenario)	2 0	
2.	Approached, greeted patient and identified self.	2 0	
3.	Asked patient to state their full name and date of birth and to spell first and last name.	2 0	
4.	Verbally matched the patient identification to the requisition.	2 0	
5.	Explained the procedure and obtained consent.	2 0	
6.	Verified collection requirements and identified sensitivities and potential problems.	2 0	
7.	Sanitized hands and put on gloves. <i>Competitor switches to the venipuncture arm/venipuncture hand.</i>	2 0	
8.	Positioned the phlebotomy arm for the venipuncture procedure.	2 0	
9.	Applied tourniquet 3 to 4 inches above the venipuncture, feeling slightly tight but not rolled or twisted.	2 0	
10.	Verbalized asked patient to close the hand.	1 0	
11.	Selected the vein in the appropriate area by palpating with the tip of the index finger.	1 0	
12.	Released tourniquet and asked patient to relax their hand.	1 0	
13.	Visualized the location of the vein and noted the position in reference to hair, skin creases, scars, or a mole.	1 0	
14.	Cleaned selected puncture site using back and forth friction with adequate pressure to cleanse site.	2 0	
15.	Allowed the site to air dry.	1 0	
16.	Prepared the equipment by selecting appropriate equipment and attaching the butterfly to an evacuated tube adaptor.	1 0	
17.	Reapplied the tourniquet.	1 0	
18.	Uncapped and inspected needle.	1 0	
19.	Verbalized asked patient to close their hand. Anchored the vein below the puncture site.	1 0	
20.	Anchored the vein below the puncture site.	1 0	
21.	Held the butterfly needle with wings upward and bevel up.	1 0	
22.	Inserted the needle smoothly and at the correct angle.	1 0	
23.	Maintained placement of the needle by holding or otherwise securing the device throughout the collection.	1 0	
24.	Grasped the short wings of the tube holder with the index and middle fingers.	1 0	

Skill IIIB: Venipuncture Using a Butterfly & Evacuated Tube Adaptor (con't)	Possible	Awarded
25. Pushed the tube into the needle with the thumb.	1 0	
26. Established blood flow and filled the tube until the vacuum was exhausted and the blood flow stopped.	1 0	
27. Completed the blood draw in the correct order (the scenario will use all of the colored tubes). a. Light blue b. Red, red/gray mottled or gold stopper c. Light or dark green top, green/gray mottled d. Lavender/purple, pink, or white/pearl top	8 0	
28. Filled, removed, and mixed tubes per manufacturer's instructions.	2 0	
29. Removed the tourniquet when the last tube starts to fill.	1 0	
30. Removed the needle in a smooth motion and activated needle safety feature.	2 0	
31. Placed clean folded gauze pad over the site with free hand and applied pressure and mixed tubes per manufacturer's instructions.	2 0	
32. Instructed patient to maintain pressure on venipuncture site until bleeding stops.	2 0	
33. Checked the patient's arm for no additional bleeding and applied bandage.	2 0	
34. Discarded blood collection unit in a biohazard sharps container.	2 0	
35. Labeled and prepared tubes for handling and transport in appropriate specimen bag.	1 0	
36. Disposed of used materials appropriately and cleaned up workspace.	2 0	
37. Thanked patient.	2 0	
38. Removed and disposed of gloves, and washed hands or used alcohol-based handrub for hand hygiene.	2 0	
39. Used appropriate verbal and nonverbal communication with patient and other personnel.	2 0	
40. Practiced standard precautions throughout skill.	2 0	
TOTAL POINTS – SKILL IIIB 70% Mastery for Skill IIIB = 47.6	68	

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This skill can be combined with IIIA/IIIB OR venipuncture arm can be set up when the competitor enters the room.

A venipuncture arm should be used for this skill.

Skill IV: Steps to Follow if Patient Starts to Faint During Venipuncture (Time: 5 minutes)	<i>Possible</i>	<i>Awarded</i>
1. Verbally recognized a minimum of four signs and symptoms of syncope. (Paleness, perspiration, hyperventilation, vertigo, dizziness, light-headedness, nausea, tunnel vision, fading hearing).	4 0	
2. The judge states, "Heavy perspiration, pale skin, and shallow or fast breathing are noted." Immediately released the tourniquet.	2 0	
3. Removed the needle and activated the safety device and discarded.	2 0	
4. Called for help.	2 0	
5. Applied pressure to the site.	2 0	
6. Stood in front of the phlebotomy chair or next to the bedside to prevent patient from falling or slipping.	2 0	
7. Lower the patient's head and arms by placing both between the patient's knees.	2 0	
8. Instructed patient to breathe deeply.	2 0	
9. Loosened tight clothing.	2 0	
10. Verbalized to judge that no ammonia inhalant was used.	2 0	
11. Applied a cold compress or wet washcloth to the forehead and back of the neck if available.	2 0	
12. Provided the patient with basin, trash can or other container if experiences nausea and vomiting.	2 0	
13. Remained with patient until appropriate personnel arrives. <i>Judge states, "Outpatient supervisor OR charge nurse has arrived."</i>	2 0	
14. Documented incident on HOSA chart.	2 0	
15. Removed and disposed of gloves, and washed hands or used alcohol-based handrub for hand hygiene.	2 0	
16. Used appropriate verbal and nonverbal communication with patient and other personnel.	2 0	
17. Practiced standard precautions throughout skill.	2 0	
TOTAL POINTS – SKILL IV 70% Mastery for Skill IV = 25.2	36	

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Skill V: Heel Puncture (Time: 5 minutes)		<i>Possible</i>	<i>Awarded</i>
1.	Reviewed test request (scenario).	2	0
2.	Approached, greeted, and identified patient using two identifiers.	2	0
3.	Explained the procedure and obtained consent from parents if present.	2	0
4.	Verified collection requirements and identified sensitivities and potential problems.	2	0
5.	Prepared needed equipment and supplies.	2	0
6.	Sanitized hands and put on gloves.	2	0
7.	Positioned the patient - infant lying face up with the foot lower than the torso.	1	0
8.	Select puncture site – medial or lateral plantar surface of the heel (avoiding bruised, swollen areas, or previous puncture site).	2	0
9.	Warmed the site for three to five minutes by use of a wet washcloth, towel, or diaper, or a commercial heel-warming device.	1	0
<i>Judge states, "It has been five minutes".</i>			
10.	Cleaned site with alcohol pad with back and forth friction and air-dried the site.	2	0
11.	Grasped the heel firmly with nondominant hand, encircling the heel by wrapping your index finger around the arch and your thumb around the bottom with other fingers around the foot.	2	0
12.	Held the lancet between the thumb and index fingers of the dominant hand.	1	0
13.	Placed the lancet flat against the skin to ensure good contact and activated the release mechanism.	1	0
14.	Puncture was no more than 2mm deep in the infant's heel.	2	0
15.	Removed lancet from skin and discarded the lancet in a sharp container immediately after puncture.	2	0
16.	Lower the heel and applied gently pressure until blood drop forms.	1	0
17.	Verbalized " <i>wiped away the first drop of blood with a gauze pad.</i> " Judge places one drop of simulated blood on the heel after competitors verbalized first drop of blood is wiped away.	1	0
18.	Formed a drop of blood and scooped it into the blood collection tube to collect blood for the requested laboratory test.	1	0
19.	Filled and mixed tubes/containers in order of draw (per scenario).	1	0
20.	Placed gauze, elevated the heel and applied pressure until bleeding stops.	2	0

Skill V: Heel Puncture (con't)		Possible		Awarded
21.	Labeled and prepared the specimen for handling and transport.	1	0	
22.	Checked the site to ensure bleeding has stopped. (no bandage is applied due to risk of choking).	2	0	
23.	Discarded used materials.	2	0	
24.	Thanked the patient, and parent or guardian.	2	0	
25.	Removed and disposed of gloves, and washed hands or used alcohol-based handrub for hand hygiene.	2	0	
26.	Documented incident on HOSA chart.	2	0	
27.	Used appropriate verbal and nonverbal communication with patient and other personnel.	2	0	
28.	Practiced standard precautions throughout skill.	2	0	
TOTAL POINTS – SKILL V		47		
70% Mastery for Skill V= 32.9				

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Venipuncture has been completed, and soiled gloves are to be removed.

Skill VI: Removing Contaminated Gloves (Time: 3 minutes)		<i>Possible</i>	<i>Awarded</i>
1.	Grasped the outside of one glove below the wrist with the opposite gloved hand.	2 0	
2.	Pulled the glove inside out, over the hand.	2 0	
3.	Pulled the glove off the hand and held in the gloved hand.	2 0	
4.	Slipped fingers of non-gloved hand under the wrist of the gloved hand.	2 0	
5.	Pulled the glove inside out over the hand so that the glove ended up inside the second glove, with no exterior glove surfaces exposed.	2 0	
6.	Placed contaminated gloves into the proper waste receptacle.	2 0	
7.	Washed hands or used alcohol-based handrub for hand hygiene.	2 0	
8.	No contact was made with the contaminated area throughout the procedure.	2 0	
TOTAL POINTS -- SKILL VI		16	
70% Mastery for Skill VI = 11.2			

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This skill can be combined with IIIA/IIIB OR venipuncture arm can be set up when competitor enters the room.

A venipuncture arm should be used with this skill.

Skill VII: Accidental Arterial Stick (Time: 5 minutes)		<i>Possible</i>	<i>Awarded</i>
1.	Verbalized indications of accidental arterial stick- rapidly forming hematoma, bright red blood pulsing into the collection tube.	2	0
2.	Released the tourniquet.	2	0
3.	Removed the needle, activated the safety device, and discarded the needle in the sharps container.	2	0
4.	Applied pressure to the puncture site for minimum of 5 minutes, or until the bleeding stopped. <i>Judge reports, "bleeding has stopped."</i>	2	0
5.	When the bleeding stopped, applied a taut gauze dressing.	2	0
6.	Instructed patient to keep arm relatively still for short period of time.	2	0
7.	Informed charge nurse (judge) of the occurrence.	1	0
8.	Verbalized checked with laboratory supervisor (judge) to determine if blood is usable. <i>Judge states, "bloodwork is acceptable."</i>	1	0
9.	Labeled the tube with patient name and date of birth, and "arterial blood."	2	0
10.	Removed and disposed of gloves, and washed hands or used alcohol-based handrub for hand hygiene.	2	0
11.	Documented incident on HOSA chart.	2	0
12.	Used appropriate verbal and nonverbal communication with patient and other personnel.	2	0
13.	Practiced standard precautions throughout skill.	2	0
TOTAL POINTS -- SKILL VII		24	
70% Mastery for Skill VII = 16.8			

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Skill VIII: 24 Hour Urine Collection (Time: 3 minutes)		<i>Possible</i>	<i>Awarded</i>
1.	Reviewed test request (scenario).	2 0	
2.	Approached, greeted patient, and identified self.	2 0	
3.	Identified patient by asking patient to state their full name and date of birth and to spell first and last name.	2 0	
4.	Explained the procedure and obtained consent.	2 0	
5.	Labeled the container with patient name and date of birth.	1 0	
6.	Labeled urine container with specific preservative and any precautions (per scenario).	2 0	
7.	Instructed patient not to urinate directly into the container due to risk of splashing.	2 0	
8.	Instructed patient to void upon awakening and to discard urine.	2 0	
9.	Noted the time and date on the specimen label for first urination and placed it on the container.	2 0	
10.	Instructed patient to collect all urine voided for the next 24 hours.	2 0	
11.	Instructed patient to refrigerate the specimen throughout the collection period if required (per scenario). Specimen placed in refrigerator or in chest placed in the bathtub.	2 0	
12.	Instructed patient to collect urine prior to bowel movement not after.	1 0	
13.	Instructed patient to drink a normal amount of fluid unless directed otherwise.	1 0	
14.	Instructed patient on second morning to void at the same time and add to collection container and seal container.	2 0	
15.	Instructed patient to inform staff when test is complete for transport to the laboratory.	2 0	
16.	Used appropriate verbal and nonverbal communication with patient and other personnel.	2 0	
17.	Practiced standard precautions throughout skill.	2 0	
TOTAL POINTS -- SKILL VIII		31	
70% Mastery for Skill VIII = 21.7			

