



Sports Medicine

PLEASE NOTE THE FOLLOWING DIFFERENCES IN HOW THIS EVENT WILL BE RUN AT HOSA CANADA'S FALL LEADERSHIP CONFERENCE (FLC) AND SPRING LEADERSHIP CONFERENCE (SLC):

1. Written test time shortened to 40 minutes (still 50 questions) for both FLC and SLC.
2. Written test will take place online and be open book for both FLC and SLC.
3. Only the written test will be evaluated at FLC.
4. The Round Two skill demonstration at SLC may be virtual, in-person, or hybrid. For more info on whether you are expected to participate in-person or line, please visit our website.
 - a. *If students participate over Zoom, they must have their cameras on for the entire duration of the event and show the judges their surroundings to help us minimize cheating as much as possible.*
 - b. *Students participating over Zoom have the option of demonstrating their skill on a friend/family member.*
 - c. *Competitors may verbalize their skill demonstration, especially if they have not purchased the materials required for their event (no points will be deducted).*

New for 2021-2022

Skill steps and point values have been updated.
Orthopedic Taping, Wrapping, Bracing and Padding by Beam 4th edition has been released.

Event Summary

Sports Medicine provides members with the opportunity to gain knowledge and skills required for patient care in a sports medical setting. This competitive event consists of 2 rounds. Round One is a written, multiple-choice test and the top scoring competitors will advance to Round Two for the skills assessment. This event aims to inspire members to be learn more about injury prevention, therapeutic intervention, and immediate care.

Sponsorship This competitive event is sponsored by the National Athletic Trainers' Association

Dress Code Competitors shall wear proper business attire or official HOSA uniform, or attire appropriate to the occupational area, during both rounds. Bonus points will be awarded for proper dress.

- General Rules**
1. Competitors in this event must be active members of HOSA and in good standing.
 2. Secondary and Postsecondary / Collegiate divisions are eligible to compete in this event.
 3. Competitors must be familiar with and adhere to the "General Rules and Regulations of the HOSA Competitive Events Program (GRR)."
 4. All competitors shall report to the site of the event at the time designated for each round of competition. At ILC, competitor's photo ID must be presented prior to ALL competition rounds.

Official References

5. The official references are used in the development of the written test and skill rating sheets.
 - [Beam, Joel W. Orthopedic Taping, Wrapping, Bracing, and Padding. F.A. Davis, Latest edition.](#)
 - [France, Bob. Introduction to Sports Medicine and Athletic Training. Cengage, Latest edition.](#)
 - [Prentice, William E. The Role of the Athletic Trainer in Sports Medicine: An Introduction for the Secondary School Student, McGraw Hill, Latest edition.](#)

Round One Test

6. Test Instructions: The written test will consist of 50 multiple choice items in a maximum of 60 minutes.
7. **Time Remaining Announcements:** There will be a verbal announcement when there are 30 minutes, 15 minutes, 5 minutes, and 1 minute remaining to complete the test.
8. **Written Test Plan**
 - Injury / Illness Prevention and Wellness Promotion30%
 - Examination, Evaluation, and Assessment30%
 - Immediate and Emergency Care16%
 - Therapeutic Intervention.....16%
 - Healthcare Administration and Professional Responsibilities.....8%

*NOTE: **Chartered associations** may use a different process for testing, to include but not limited to pre-conference testing, online testing, and testing at a computer. Check with your Chartered Association for the process you will be using.*

9. The test score from Round One will be used to qualify the competitor for the Round Two.
10. **Sample Test Questions**
 1. Which professional can best advise an athlete on the psychological aspects of the rehabilitation process and how to cope with an injury?
 - A. Sports physiologist
 - B. Sports neurologist
 - C. Sports psychologist**
 - D. Sports massage therapistPrentice Page 13
 2. Which vitamin is essential for the metabolism of carbohydrates and some amino acids, maintenance of normal appetite, and functioning of the nervous system?
 - A. Ascorbic acid
 - B. Niacin
 - C. Riboflavin
 - D. Thiamine**France Page 96
 3. What is a common mechanism of injury for an MCL sprain?
 - A. Quick deceleration, cutting, twisting, and landing movement.
 - B. Abduction and lower leg rotation on a planted foot.
 - C. Falling on the anterior knee while in a flexed position.
 - D. Adduction and internal rotation of the knee.**Beam Page 157

Round Two Skills

11. Round Two is the performance of a selected skill(s). The Round Two skills approved for Round Two for this event are:
 - Skill I: Anatomical Landmark Identification (7 minutes)
 - Skill II: Joint Action and Maximum Range of Motion Identification (15 minutes)

Skill III: Taping / Wrapping

- A. Ankle (Inversion) (5 minutes)
- B. Achilles Tendon (6 minutes)
- C. Shoulder Spica (5 minutes)
- D. Wrist / Hand (Circular Wrist/Figure Eight) (4 minutes)

NOTE: Skill II Options- This skill may use a live patient to demonstrate poses for competitors to identify. In this case, the competitor will have 15 minutes to identify 15 different numbered poses and it will be the competitor's responsibility to tell the patient when the competitor is ready to move to the next numbered pose. Competitors may request the live patient repeat poses as often as needed during this timeframe, and poses do not need to be done in order. As an alternative to using a live patient, numbered photographs of patients in varying poses may be used. Spelling counts! Competitors should come prepared for either option.

- 12. 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 and will include a challenging component that will require the competitors to apply critical thinking skills. A sample scenario can be found here.
- 13. Timing will begin when the scenario is presented to the competitors and will be stopped at the end of the time allowed.
- 14. 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.
- 15. Judges will provide information to competitors as directed by the rating sheets. Competitors may ask questions of the judges while performing skills if the questions relate to patient physiology and will be included in the scenario

Final Scoring

- 16. The competitor must earn a score of 70% or higher on the combined skills of the event (excluding the test, Anatomical Landmark Identification and Joint Action and Range of Motion Identification) in order to be recognized as an award winner at the ILC.
- 17. Final rank is determined by adding the round one test score plus round two skill score. In case of a tie, the highest test score will be used to determined final placement.

Competitors Must Provide:

- A photo ID
- Two #2 lead pencils with eraser
- Watch with second hand (optional-Round Two only)
- Appropriate tape of any size, color or type
- Elastic wrap (used for Skill III-C)
- Tape scissors or tape cutter
- Thin foam pads (heel and lace pads) with skin lubricant (used for Skill III-A & B)
- Pad for shoulder (used for Skill III-C)
- Underwrap of any size, color or type

Note: It is the competitor's responsibility to know what size and type(s) of tape/elastic wrap is (are) needed for each taping/wrapping skill, and to bring the appropriate materials to the event.

Skill I: Anatomical Landmark Identification

Anatomy of the:	Bones (<i>including bony landmarks & joint names</i>)	Ligaments or Other Structures	Muscles (<i>including origin & insertion, belly, & tendons</i>)
Foot	Phalanges 1-5 Metatarsals Tarsals	Transverse arch Longitudinal arches	Adductor Hallucis Flexor/Extensor Digitorum Extensor Hallucis Longus
Ankle & Lower Leg	Tibia Fibula Tarsals	Anterior/Posterior Tibiofibular Anterior/Posterior Talofibular Deltoid Calcaneofibular	Fibularis(Peroneus) Longus/Brevis Achilles Tendon Extensor/Flexor Digitorum Longus Soleus Tibialis Anterior Extensor/Flexor Hallucis Longus Gastrocnemius
Knee	Femur Patella Tibia Fibula	Medial Collateral Lateral Collateral Patellar Ligament/Tendon	Rectus Femoris Vastus Lateralis Vastus Medialis Oblique Sartorius Gracilis Biceps Femoris Semitendinosus Semimembranosus Popliteus
Elbow & Forearm	Humerus Radius Ulna	Ulnar Collateral Radial Collateral Annular	Biceps/Triceps Brachioradialis Supinator Pronator Teres Pronator Quadratus Flexor/Extensor Carpi Ulnaris Flexor/Extensor Carpi Radialis
Wrist, Hand & Fingers	Phalanges 1-5 Carpals Metacarpals	Anatomical Snuffbox Thenar/Hypothenar Eminence	Flexor/Extensor Digiti Minimi Abductor Pollicis Longus Flexor/Extensor Pollicis
Shoulder	Clavicle Scapula Humerus	Sternoclavicular Acromioclavicular Glenohumeral Coracoclavicular Coracoacromial	Infraspinatus Teres Major/Minor Deltoid Biceps/ Triceps Rhomboids Major/Minor Levator Scapula Trapezius Serratus Anterior Latissimus Dorsi
Neck, Spine & Head	Cervical Spine 1-7 Thoracic Spine 1-12 Lumbar Spine 1-5 Parietal Occipital Temporal Zygomatic Frontal Nasal Maxilla Mandible	None	None

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Competitor #: _____ Judge's Signature: _____

Skill I Anatomical Landmark Identification (Time: 7 minutes)	Possible Points	Awarded
<p>A. <i>This skill enables competitors to demonstrate their knowledge of musculoskeletal anatomy. Competitors will place a small adhesive label over the specified anatomical location of a live patient. Competitors will have 15 seconds to identify each landmark requested by the judge. Landmarks may include specific boney sites, muscles (origin, insertion, belly, tendon), or ligaments.</i></p> <p>The Head Athletic Trainer (judge) will inform the competitor which 21 locations are to be identified, one at a time. The competitor will then have 15 seconds to place the small adhesive label on the patient in the correct location. Competitor should verbalize when they are finished with each landmark so the judge can move on to the next one. The timekeeper will stop competitor once 15 seconds has elapsed, so judge can verbalize next landmark.</p> <p><i>Competitor earns 2 points for correctly identifying each landmark within the given time frame.</i></p>		
<p>B. Anatomy of the Foot:</p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p>	<p>2 0</p> <p>2 0</p> <p>2 0</p>	
<p>C. Anatomy of the Ankle & Lower Leg:</p> <p>4. _____</p> <p>5. _____</p> <p>6. _____</p>	<p>2 0</p> <p>2 0</p> <p>2 0</p>	
<p>D. Anatomy of the Knee:</p> <p>7. _____</p> <p>8. _____</p> <p>9. _____</p>	<p>2 0</p> <p>2 0</p> <p>2 0</p>	

<p>E. Anatomy of the Neck, Spine & Head:</p> <p>10. _____</p> <p>11. _____</p> <p>12. _____</p>	<p>2 0</p> <p>2 0</p> <p>2 0</p>	
<p>F. Anatomy of the Shoulder:</p> <p>13. _____</p> <p>14. _____</p> <p>15. _____</p>	<p>2 0</p> <p>2 0</p> <p>2 0</p>	
<p>G. Anatomy of the Elbow & Forearm:</p> <p>16. _____</p> <p>17. _____</p> <p>18. _____</p>	<p>2 0</p> <p>2 0</p> <p>2 0</p>	
<p>H. Anatomy of the Wrist, Hand & Fingers:</p> <p>19. _____</p> <p>20. _____</p> <p>21. _____</p>	<p>2 0</p> <p>2 0</p> <p>2 0</p>	
<p>TOTAL POINTS -- SKILL I</p>	<p>42</p>	

Skill II: Joint Action & Maximum Range of Motion Identification

<input type="checkbox"/>	Foot/Ankle eversion	20 degrees
<input type="checkbox"/>	Foot/Ankle inversion	40 degrees
<input type="checkbox"/>	Ankle dorsiflexion	20 degrees
<input type="checkbox"/>	Ankle plantarflexion	45 degrees
<input type="checkbox"/>	Knee flexion	140 degrees
<input type="checkbox"/>	Hip adduction	40 degrees
<input type="checkbox"/>	Hip abduction	45 degrees
<input type="checkbox"/>	Hip extension	10 degrees
<input type="checkbox"/>	Hip flexion	125 degrees
<input type="checkbox"/>	Hip internal rotation	45 degrees
<input type="checkbox"/>	Hip external rotation	45 degrees
<input type="checkbox"/>	Shoulder flexion	180 degrees
<input type="checkbox"/>	Shoulder extension	50 degrees
<input type="checkbox"/>	Shoulder abduction	180 degrees
<input type="checkbox"/>	Shoulder adduction	40 degrees
<input type="checkbox"/>	Shoulder internal rotation	90 degrees
<input type="checkbox"/>	Shoulder external rotation	90 degrees
<input type="checkbox"/>	Elbow flexion	145 degrees
<input type="checkbox"/>	Forearm pronation	80 degrees
<input type="checkbox"/>	Forearm supination	85 degrees
<input type="checkbox"/>	Wrist extension	70 degrees
<input type="checkbox"/>	Wrist flexion	80 degrees
<input type="checkbox"/>	Wrist radial deviation/abduction	20 degrees
<input type="checkbox"/>	Wrist ulnar deviation/adduction	45 degrees

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Skill II: Joint Action & Maximum ROM Identification (Time: 15 minutes)

Competitors will identify joint name, action and maximum range of motion from provided photographs or from the live patient demonstration. Spelling counts!

Competitor #: _____ Judge's Initials: _____ Total Points Awarded= _____

	Name of Joint (1 pt each, name & spelling)	Possible Points	Name of Action (1 pt each, name & spelling)	Possible Points	Max Range of Motion (1pt)	Possible Points	Points Awarded
1		2 0		1 0		1 0	
2		2 0		1 0		1 0	
3		2 0		1 0		1 0	
4		2 0		1 0		1 0	
5		2 0		1 0		1 0	
6		2 0		1 0		1 0	
7		2 0		1 0		1 0	
8		2 0		1 0		1 0	
9		2 0		1 0		1 0	
10		2 0		1 0		1 0	
11		2 0		1 0		1 0	
12		2 0		1 0		1 0	
13		2 0		1 0		1 0	
14		2 0		1 0		1 0	
15		2 0		1 0		1 0	
Name & Spelling (30 poss)			Action & Spelling (30 poss)		ROM (15 poss)		TOTAL: 75 pts poss

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Competitor #: _____ Judge's Signature: _____

Skill III-A Taping – Ankle (Inversion) (Time: 5 minutes)		Possible		Awarded
1.	Obtained instructions from Head Athletic Trainer (judge).	1	0	
2.	Assembled equipment.	1	0	
3.	Greeted patient and introduced self.	1	0	
4.	Identified patient and explained skill.	2	0	
5.	Positioned patient sitting on a taping table with the leg extended off the edge with the foot in dorsiflexion.	1	0	
6.	Demonstrated spraying area with tape adherent (without actually spraying adherent on patient).	1	0	
7.	Applied pre-wrap, or self-adherent wrap, and thin foam pads with skin lubricant over the heel and lace areas to provide additional adherence and lessen irritation.	1	0	
8.	Applied one thin, smooth layer of pre-wrap to foot and ankle.	1	0	
9.	Using non-elastic tape, applied two anchor strips at a slight angle around the distal lower leg, just inferior to the gastrocnemius belly.	1	0	
10.	Placed an anchor strip around the midfoot, proximal to the fifth metatarsal head.	1	0	
11.	Started the first stirrup on the medial lower leg anchor and proceeded down over the posterior medial malleolus, across the plantar surface of the foot and continued up and over the posterior lateral malleolus, finishing on the lateral lower leg anchor.	1	0	
12.	Began the first horseshoe strip on anchor of the medial aspect of the midfoot, continued around the distal Achilles tendon, across the distal lateral malleolus, and finished on the anchor of the lateral midfoot, proximal to the fifth metatarsal head.	1	0	
13.	Started the second stirrup on the medial lower leg anchor by overlapping the first by ½ of the tape width, continued down over the medial malleolus, across the plantar foot, up and over the lateral malleolus, and finished on the anchor of the lateral lower leg.	1	0	

Skill III-A Taping – Ankle (continued)		Possible	Awarded
14.	Began the second horseshoe on the medial rearfoot and overlapped the first by ½ of the tape width.	1 0	
15.	Applied the third stirrup, beginning on the medial lower leg anchor, overlapping the second and covered the anterior medial and lateral malleoli.	1 0	
16.	Starting on the medial rearfoot, applied the third horseshoe, overlapping the second.	1 0	
17.	Beginning at the third horseshoe, applied closure strips in a proximal direction, overlapping each by ½, up to anchor strip on lower leg.	1 0	
18.	Applied two to three closure strips around the midfoot in a medial-to-lateral direction.	1 0	
20.	In steps # 10, 11, 13 and #15 above, the strips and anchors did not put pressure on the 5 th metatarsal head.	2 0	
21.	Anchored the first heel lock across the lateral lace area at an angle toward the medial longitudinal arch. Continued across the arch, then angled the tape upward and pulled across the lateral calcaneus, around the posterior heel, finishing on the lateral lace area.	1 0	
22.	Repeated the same pattern on the other side of the ankle joint moving in the opposite direction.	1 0	
23.	Applied two or three heel locks to ensure maximum stability (<i>use of either individual heel locks or continuous heel locks is acceptable</i>).	1 0	
24.	Reported skill and observations to the Head Athletic Trainer (judge). (Judges evaluate taping at this time)	4 0	
25.	Upon direction of the athletic trainer, properly used tape scissors (cutter) to remove taping.	2 0	
26.	All tape applied with mild to moderate roll tension.	1 0	
27.	Allowed tape to fit the natural contour of the skin.	1 0	
28.	Skill completed on the correct side / body part.	4 0	
29.	Properly disposed of used taping materials.	1 0	
30.	Appropriate verbal and nonverbal communication with patient and other personnel.	2 0	
TOTAL POINTS -- SKILL III-A		39	
70% Mastery for Skill III-A = 27.3			

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Competitor #: _____

Judge's Signature: _____

Skill III-B Taping – Achilles Tendon (<i>Technique Two</i>) (Time: 6 minutes)	Possible	Awarded
1. Obtained instructions from Head Athletic Trainer (judge).	1	0
2. Assembled equipment.	1	0
3. Greeted patient and introduced self.	1	0
4. Identified patient and explained skill.	2	0
5. Positioned patient prone or kneeling on a taping table, with the lower leg extended off the edge.	1	0
6. Placed hand on the plantar surface of the distal foot and slowly moved foot into dorsiflexion until patient notifies competitor that pain occurs.	1	0
7. When painful range of motion is determined, placed foot in pain-free range & maintained the position during application.	1	0
8. Demonstrated spraying the lower leg and plantar surface of the foot with tape adherent (<i>without actually spraying adherent on patient</i>).	1	0
9. Applied pre-wrap over the area being taped to lessen irritation.	1	0
10. Placed thin foam pad over the heel to prevent irritation.	1	0
11. Applied two anchors around the lower leg, inferior to the knee, around the upper portion of the gastrocnemius belly.	1	0
12. Placed the other anchor around the ball of the foot.	1	0
13. Anchored a strip of 2" heavyweight elastic tape on the mid-to-distal plantar foot. Proceeded over the middle calcaneus, and finished on the distal lower leg anchor.	1	0
14. Anchored the next strip of 2" heavyweight elastic tape at an angle over the head of the 5 th metatarsal, continued over the medial calcaneus, and finished on the medial lower leg anchor.	1	0
15. Placed the last 2" heavyweight elastic tape strip at an angle over the head of the 1 st metatarsal, proceeded over the lateral calcaneus, and finished on the lateral lower leg anchor.	1	0
16. Completed the series by placing 2-3 circular strips of 2" elastic tape around the foot.	1	0
17. Placed 4-6 strips of 2" elastic tape around the lower leg.	1	0
18. Reported skill and observations to the Head Athletic Trainer (judge). (<i>Judges evaluate taping at this time</i>)	4	0
19. Upon direction of the athletic trainer, properly used tape scissors (cutter) to remove taping.	2	0
20. Completed tape allows for normal, yet pain free, action of the Achilles tendon with support.	2	0
21. Skill completed on the correct side / body part.	4	0
22. Properly disposed of used taping materials.	2	0
23. Appropriate verbal and nonverbal communication with patient and other personnel.	2	0
TOTAL POINTS -- SKILL III-B 70% Mastery for Skill III-B = 23.8	34	

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Competitor #: _____ Judge's Signature: _____

Skill III-C Wrapping – Shoulder Spica[^] (Time: 5 minutes)		Possible	Awarded
1.	Obtained instructions from Head Athletic Trainer (judge).	1	0
2.	Assembled equipment.	1	0
3.	Greeted patient and introduced self.	1	0
4.	Identified patient and explained skill.	2	0
5.	Requested patient stand with hand of the involved arm placed on the lateral hip in a relaxed manner.	1	0
6.	Placed pad over the injured area directly on to skin.	1	0
7.	Anchored the extended end of the wrap on the mid-to-proximal lateral upper arm and proceeded around the upper arm in a medial direction to encircle the anchor.	1	0
8.	At the posterior upper arm, continued the wrap in a medial direction over the lateral shoulder, across the chest, under the axilla of the non-involved arm, then across the upper back.	1	0
9.	Next, continued over the lateral involved shoulder, under the axilla, and encircle the upper arm.	1	0
10.	Repeat this spica pattern two to four times with the wrap, overlapping slightly.	1	0
11.	Finished the wrap over the involved shoulder, upper back, or thorax area.	1	0
12.	Anchored 2-3" elastic tape at the end of the wrap and applied 1-2 spica patterns over the wrap with this tape.	1	0
13.	Reported skill and observations to the Head Athletic Trainer (judge). <i>(Judges evaluate taping at this time)</i>	4	0
14.	Upon direction of the athletic trainer, properly used tape scissors (cutter) to remove taping.	2	0
15.	Wrap tension is moderate, yet prevents constriction and irritation of the axilla areas.	2	0
16.	Skill completed on the correct side / body part.	4	0
17.	Properly disposed of used taping materials.	2	0
18.	Appropriate verbal and nonverbal communication with patient and other personnel.	2	0
TOTAL POINTS -- SKILL III-C		29	
70% Mastery for Skill III- C = 20.3			

[^]This wrap may be done over a tee shirt or tank top for this event.

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Competitor #: _____ Judge's Signature: _____

Skill III-D Taping – Wrist/Hand (Circular Wrist/<i>Figure of Eight</i>) (Time: 4 minutes)	Possible	Awarded
1. Obtained instructions from Head Athletic Trainer (iudge).	1 0	
2. Assembled equipment.	1 0	
3. Greeted patient and introduced self.	1 0	
4. Identified patient and explained skill.	2 0	
5. The patient should sit on table or bench with the wrist in a neutral position and the fingers in abduction.	1 0	
6. Demonstrated spraying area with tape adherent (without actually spraying adherent on patient).	1 0	
7. Applied pre-wrap to the wrist and hand to lessen irritation.	1 0	
8. Anchored non-elastic tape over the ulnar styloid process and continued in a circular, lateral-to-medial direction around the wrist and returning to the anchor.	1 0	
9. Applied 4-5 additional circular strips around the wrist, overlapping by ½ the width of the tape. (<i>Strips may be applied individually or continuously</i>)	1 0	
10. Beginning again at the ulnar styloid process, applied tape in a medial direction over the dorsum of the hand, over the thenar web space, then across the distal palm. (<i>Tape may need to be creased through the thenar web space to prevent constriction</i>)	1 0	
11. Continued from the fifth metacarpal over the dorsum of the hand to the distal radius around the wrist, and returned to the ulnar styloid process.	1 0	
12. Repeated this figure eight pattern, overlapping by 1/3 the tape width, and anchored on the dorsal wrist.	1 0	
13. Reported skill and observations to the Head Athletic Trainer (judge). (<i>Judges evaluate taping at this time</i>)	4 0	
14. Upon direction of the athletic trainer, properly used tape scissors (cutter) to remove taping.	2 0	
15. Tape is of moderate tension and does not cause constriction of the hand and thumb.	2 0	
16. Tape remains proximal to the metacarpophalangeal joints of the hand.	1 0	
17. Skill completed on the correct side / body part.	4 0	
18. Properly disposed of used taping materials.	2 0	
19. Appropriate verbal and nonverbal communication with patient and other personnel.	2 0	
TOTAL POINTS – SKILL III-D 70% Mastery for Skill III-D = 21	30	